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Representing the deciduous, citrus and dried fruits industry of Australasia.

Published the First of each Month.

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THE CANNED FRUIT POSITION.

Growers' Meetings and Deputations.

An Interesting Review.

Very candid statements were made at the recent deputation of Northern Victorian irrigation fruitgrowers at the recent deputation to the Minister of Customs (Mr. Chapman) when the payment of the final instalment (10 per cent.), which had been retained, was requested.

The payment of this sum was agreed to, but the second request of the deputation, viz., the payment of last year's "pool" prices, was only promised "consideration."

Deputationists pointed out that the growing of canning fruits had been overbalanced by Government action. In the first place the State Governments, particularly Victoria and New South Wales, had opened irrigation areas and had financed settlers in the production of fruit for canning. Grievous and costly errors were made in advising the planting of unsuitable varieties. Pioneer settlers who had spent 25 years in the industry, and who were developing their orchards in accordance with the normal expansion of markets, now found that their industry was unprofitable because of the huge quantity of fruit coming forward from Government-financed lands. It was also self-evident that these newer settlers were in a similar plight as their fruit only added to the surplus.

The canned fruit pools, created to assist the growers were, it was stated, temporary and unsatisfactory expedients. The prices paid to growers did not cover the cost of production.

The control and high price of sugar had wrought grievous harm to the industry. Jam had become a luxury, and the consumption of same had fallen off alarmingly; fruit which was not suitable for cannng was now wasted instead of being made into jam. Growers were not permitted to import sugar when it was cheap abroad and had to pay a fictitiously high price to Australian sugar monopoly. In addition to its high price there were all the inconveniences incidental to Government control. Sugar costs were a tax of £80 per acre on orchardists.

Asked for a solution of the problem, deputationists were not inclined to offer suggestions, seeing that Australian fruitgrowers' conferences were due to be held in May. The request was made, however, that as the Governments having spent money in bringing "the ship to the rocks," should spend as much money in "refloating it safely."

Two-fifths of the fruit for the pools came from Government-financed lands.

The Minister in reply, stated he was in possession of a departmental report opposing the payment to growers of last year's "pool" prices, as it would involve the payment of another £14,000: the growers had agreed to the present prices at the conference called last November by the ex-Minister for Customs (Mr. Rodgers).

A Voice: "We did not agree to the prices; they were presented to us in a 'take it or leave it' manner. There was a pistol at our heads."

The Minister, continuing, said he had been impressed by the views put forward and he would give it his close attention, and he would give a speedy reply.

FRUIT POOL LOSSES.

The Federal Treasurer (Dr. Earle Page) has announced that the losses in connection with the fruit pools are 1920-21 pool £61,937; 1921-22 pool £200,000. The Treasurer believes that the losses will not be anything like so heavy on the present canned fruit pool.

It is pointed out, however, that these losses are not so economically great as appear at first sight.

And in justice to the fruitgrowers it should be said that it was only with great reluctance they asked for a pool. The position has been forced upon them by circumstances beyond their control. Against the above losses must be set off the fact that an important primary industry is still in existence. Without the pools there would have been a catastrophe in the irrigation areas. Last summer in England was a "winter" and the demand for canned fruit was at a minimum. Europe is still gravely unsettled, and is not absorbing anything like the pre-war quantity of such foodstuffs as canned fruit.

SHOULD SOFT FRUIT PLANTING CEASE?

Responsible leaders amongst the fruitgrowers are definite and emphatic that the State Governments should cease their plantings of soft fruits. Big meetings have been held on the Murrumbidgee irrigation areas and a unanimous request has gone forward to the State Government asking that no more fruit trees be planted until markets are opened for the present crops.

Similar resolutions in Victoria have been adopted, and it is certain the growers will use all the power they possess to stop "Government enterprise" in this direction.

The need for a responsible superintendent of horticulture in Victoria is very great, as at the present time there is serious overlapping by Government departments—particularly the Irrigation and Repatriation sections—in this matter. One responsible head would put an end to this short-sighted policy.

Then again there is the matter of caning varieties. Even now the Government maintains its embargo against the importation of tested and valuable varieties from U.S.A. America can obtain all the good varieties from Australia, yet we are not permitted to secure theirs.

A quarantine station for imported plants could be conducted at a very small cost; this matter is one which warrants immediate attention.

A NEW APPLE.

A new Apple has been introduced by Mr. F. Walker, nurseryman and fruitgrower, of Launceston, Tasmania. The name is *Improved Red Delicious.* It is stated to be an exceedingly valuable variety in every way.

Why such a long name, however? And why "Delicious" again? We have one "Delicious" already, and it lives up to its name. Then America comes along with a "Golden Delicious." Now we have the "Improved Red Delicious."

Surely a shorter and more original name can be found before the variety is distributed commercially.

What has the Pomological Committee to say on the subject?

PROBLEMS IN PEACH TRANSIT.

Disease Develops After Picking.

Valuable Work by Victorian Department of Agriculture.

During the present Peach season a mysterious disease attacked Peaches sent from the Goulburn Valley to Melbourne. The fruit went rotten within 24 hours of being packed for market.

Mr. C. C. Brittlebank, Victorian Government Plant Pathologist, investigated the trouble, isolated the fungus, and by following his advice in cleaning the packing sheds and sterilising cases the whole trouble has disappeared. There remain the railway trucks to be cleansed.

Mr. Brittlebank has earned the thanks of the fruitgrowing community by his ready skill.

This information has been supplied by an appreciative and well-known grower. More details will be published next issue.

FOR DISPOSING OF PRUNINGS.

A Cheaply-Made Orchard Burner.

There is no better way of getting rid of prunings than to dispose of them in a proper orchard burner, writes the *N.S.W. Weekly Agricultural Gazette.* The advantages of the burner are many. Its use is quicker, and therefore cheaper, than the carting away of the prunings, and it is better for the land than the drawing of a loaded cart through the orchard. The prunings are destroyed by fire on the spot, together with any missed fruit; and should they be affected with any insect pest or fungus disease, the danger of spreading this to any other part of the orchard is lessened. In districts where heavy frosts occur, pruning for the first hour or so after sunrise is very painful for the hands, and it is almost impossible to keep one's mind solely on the job and to do good and quick work, whereas the time might be very profitably used in burning off the previous day's prunings.

An effective burner can be made very cheaply by placing a square iron tank (one discarded as useless for holding water will do) on an iron framework and wheels. The framework is simple, and can be made by any blacksmith or even by a handy man; the iron wheels can generally be obtained from a blacksmith or foundry scrap heap. The bottom of the tank should be freely pierced with 1-inch or 1½-inch holes to allow for sufficient draught to make a quick-consuming fire.

IMPORTANT CONFERENCES TO BE HELD DURING MAY.

Growers will be kept busy during May attending the various conferences which will be held. Matters of vital importance to the fruitgrowing industry are to be dealt with. The programme to date is as follows:—

Victorian Fruitgrowers' Central Association, Frankston, May 1st to 3rd.

National Advisory Board, Melbourne, May 3rd, 4th.

Pomological Committee of Australia, Melbourne, May 3, 4, and 5.

Australian Conference of Fruitgrowers, May 7-12.

They Say.

That one pound of seedless raisins represents an energising food value equal to more than one pound of beef, six pounds of Apples, five pounds of Bananas, one pound of bread, or four and a quarter pounds of potatoes.

This information is printed on a carton containing raisins.—A good advertising hint.

That growers on the Murrumbidgee Irrigation Areas strongly condemn the declared policy of the N.S.W. Government in regard to further orchard development.

That the Executives of the Fruitgrowing organizations in Victoria have definitely decided to request the State Governments to cease planting new orchards, until markets can be found for the fruit at present produced.

That the results following the introduction into New Zealand of a parasite for the woolly aphis are being followed with the closest interest; herein are big fields of investigations for the Departments of Agriculture in the several Australian States.

That the Tasmanian fruitgrowers' organisations, having proved by experience that "colour grading" is unworkable, are strongly opposed to the request from Victorian "State board" that colour grading be inserted in Federal regulations.

That flowering trees, shrubs, conifers, Palms greatly improve the appearance and value of orchard homesteads. Now is a good time for planting.

BANANAS IN NEW SOUTH WALES.

The Tweed District.

Cure for "Bunchy Top" desired.

The following figures of the output of Bananas from the Brunswick district have been made available by the Brunswick Fruitgrowers' Association, which embraces a district stretching from Burringbar to Byron Bay, with headquarters at Mullumbimby. These figures come as a surprise to many, as it was thought that, owing to the ravages of "Bunchy Top," production had decreased to a large extent. The reason that this is not so is that a large area was planted during the Banana boom, three years ago, which came into bearing during the last 12 months.

Unless, however, a cure is soon found for "Bunchy Top," there is no doubt that production will decrease considerably during the next 12 months. The number of cases sent for 12 months ended March 31, 1922, was 139,949, as against 139,629 for the past year, ended March 31 last.

AN INDUSTRIAL RECORD.

Twelve Miles of Canned Peaches Produced in One Day.

Record-breaking is nothing new to Australia, but there is something novel as well as interesting in a recent achievement at Sth. Yarra, Victoria. For some months the Australasian Jam Co.'s plant has been working at high pressure, states the *Industrial Australian.* Tuned up to a high pitch of efficiency, the staff and the equipment excelled themselves on 20th March, when what is regarded as a record for the British Empire in canning was established. On that day no less than 154,257 tins of Peaches were treated, sealed and packed. If the tins were placed on end in one continuous line they would extend over twelve miles. Imagine twelve miles of delicious canned Peaches! This record in canning was achieved whilst other sections of the factory were engaged in the production of large quantities of sauces and jams.

Since October last the South Yarra establishment has consumed an average of 20 tons of tin plate daily. Another interesting fact concerning the factory relates to the individual effort of a young female operative, who recently earned—at piece work—£9/1/5 in one week. The same girl has collected an envelope containing £18 for one week's effort. She has now retired to enter into a matrimonial partnership, in which it is hoped by her former co-workers her efforts will be as successful as they were at the A.J.C. factory.

WHAT SHALL WE PLANT?

A thoughtful review for the benefit of readers on the Irrigation Areas.

Sultanas, Oranges, Apricots and Figs are specially recommended for the Mid-Murray Areas.

(By Bronwen.)

Australia has the soil and climate necessary for big fruit production—Standardised packs are essential, and grades must be constant from season to season—Export markets vital (U.K., Canada, U.S.A., N. Zealand and the East)—Washington Navel Oranges need bud selection—Australia does not produce sufficient dried Apricots for local consumption—The possibilities of Smyrna Figs, Gordo Grapes, Almonds, fresh and dried Pears, Prunes, export Grapes and Cotton.

THROUGHOUT THE IRRIGATION AREAS there is an oft-repeated query—What Shall We Plant? In May 1922 issue of the "Fruit World" an attempt was made to deal with this vexed question; many changes have taken place in the fruit market since then, and growers, especially those who are planting up new areas, are calling for advice on what to plant. Anyone trying to establish a hard and fast line in this direction lays himself open to very severe criticism, hence it is with a great amount of diffidence that the writer attempts to throw some light upon the subject.

The statement holds good still which was made in the previous article, *"We have reached this position—we are overproducing the Commonwealth demand, but our exports are not large enough to command the attention which has been directed to many of the older Sultana-producing countries by reason of the large pack of fruit which they can place on the markets."*

This statement still stands, not only for the *Sultana,* but for every other variety of dried fruit we are producing.

The fruit industry is probably going through the after effects of the war; especially is this so in relation to the export of canned and fresh fruit.

The *dried fruit* market is very unsettled, fluctuations are taking place from time to time, and one looks in vain for a definite lead as to what will give the best returns.

During the war dried fruit prices soared beyond all expectations, with the result much inferior fruit left these shores that should never have been placed on the market. Had such practices continued, great difficulty would have been experienced in establishing a fair name beyond reproach. Wiser councils have prevailed and we now see the associations tightening up their methods of grading and packing; industries that were not organised, organising and endeavouring to exploit markets; the Commonwealth Government, jealous of Australia's fair name, bringing together the export officers and the leaders of the growers' organisations, who are formulating rules for grading and exporting of fruit.

One may ask what has this to do with the question "What shall we plant?" The reply comes, "We must look for the export market for selling our fruit and to gain the confidence of the buyer we must *standardise our packs and keep our grades the same from season to season."*

Export Markets Vital.

The export markets may be developed for our dried fruits to a larger extent in the United Kingdom, especially if the Fruit Commission which is about to return home has been successful in gaining some concessions for preference for Australian fruit. In Canada and New Zealand the markets there are great for our dried fruits and Oranges; the Near East, India, China, Japan, and America contain possibilities that may be developed to our advantage. Different markets require fruit packed in different ways, these must be studied and an effort made to supply the article in the way it will be best received.

What we shall plant will also depend upon the way we are prepared to advertise our products; not only must we consider our home markets, but we must also advertise in the overseas countries—let the public know the quality of the produce we have for sale.

This article is written mainly for the areas in which both the dried and fresh fruit growing is combined, as we find it in the majority of our irrigated settlements along the Murray Valley.

Four Profitable Fruits.

In these areas four lines stand out more prominently than others. They are—*Sultanas, Washington Navel Oranges, Dried Apricots,* and *Figs;* other lines are equally good in quality in their respective classes. These four lines were advocated in the previous article and I have no reason to alter my opinion in relation to them and believe that the main development in our irrigation fruit areas will be based along these lines.

The Australian dried *Sultana* has gained a world-wide reputation as being the finest quality Sultana produced. We need, as previously stated, to study our markets and pack to meet their peculiar requirements.

The Australian-grown *Washington Navel Orange* can hold its own for quality against any grown elsewhere. We are developing a good export trade in

this fruit, and too much praise cannot be given to the Citrus Associations for the splendid work they have already done and are continuing to do in developing the markets, and in educating growers in the methods of handling and packing the fruit. The co-operation of every grower will be needed if successful markets are going to be built on the splendid foundations that are now being laid.

The export of Oranges promises to be a very payable proposition when once the grower learns how to handle his Oranges properly. Don't blame your packing houses for all the defects in the fruit when it is opened up in the market. No packer, however careful he may be, can guarantee the fruit opening up well unless the grower has taken every precaution to deliver the fruit to him in perfect condition.

The great fault of Australian Oranges is their large size, the small and medium-sized fruit sells best, consequently growers must study their trees well to find the trees which are producing the desired Orange.

Look through any Orange grove and one will find *many strains of fruit.* Some trees are almost barren and carry only a few large, puffy, coarse fruit; others carry fair crops of large, thick-skinned Oranges; others, large fruit of good quality; and again, there are trees carrying the desired-sized high-quality Oranges for the export markets. *The unprofitable trees should be cut down and worked over with buds from trees producing the fruit the grower wants to produce.*

The question of bud selection is a very vital one to the Orange grower.

The Orange likes rich, well-drained soils. The hard, shallow soils prove unsuitable, as do also the light shallow soils overlying limestone, gravel and marl. The deep, sandy pine land grows good, profitable trees, as also does the well-worked, rich, deep, "box" flats.

Valencia Late Oranges usually command good prices, as the fruit may be left on the trees into midsummer. There should be further room for a limited area of this variety to be planted.

* * *

THE APRICOT.

THE DRIED APRICOT PACK at the present time does not meet the demands of the Australian trade, and yet it is the best paying proposition at the present time. The returns per acre are high and the ready sales give early payments.

Anyone advocating the wholesale planting of the Apricot indiscriminately over all classes of soil would be doing the grower a great injustice. Stone fruits will not last on mallee land; they should be planted on the best of soils—soils containing a fair proportion of clay, yet well drained. The "box" flat usually contains suitable soil for the Apricot, and pine land, though fairly sandy, often proves suitable to stone fruits.

* * *

THE FIG.

The Murray Valley, especially the mid-valley areas, have proved to be ideal for the production of the highest quality dried Fig produced the world over. The range of soil on which profitable crops can be produced is fairly wide, and lands containing a fair proportion of lime give the highest quality Figs. The better the soil the better are the crops produced.

The Smyrna Fig takes pride of place both as a dessert fruit in the fresh and dried state, also for jam making. As a dried article it excels far above all others, and it is in this direction that a big development can be expected in the near future.

Whether the fruit can be put up and placed on the world's markets to compete with the Turkish product has yet to be proved; in the matter of quality the locally-produced article is far superior to that of the imported. The disadvantage against which the Australian Fig on the overseas markets will have to compete, is the cheap labour used in producing the Turkish fruit. Even allowing for that, if the quality is superior and the get-up attractive, the dried article will probably hold its own. Putting the export trade aside the Australian market holds a good proposition for this fruit for many years to come, as the planting of this variety is only in the very early stages.

* * *

THE GORDO VINE.

The Muscat Gordo Blanco vine has been advocated by many as being a good proposition to grow to produce the Lexia or pudding Raisin. The recent fall in price on the London market has caused great concern to many growers, but the making of pudding Raisins is not the only use of this Muscatel Grape.

There is a small demand for Muscatel wine; the fruit may be sent to the distilleries, but there is a neglected avenue of disposing of this fruit which gives payable returns.

The making of London layers or clusters should be more largely carried on. In some of our fruit centres one sees the imported table Raisins on the shelves in the stores. Asked why? the storeman replies, "I cannot obtain local clusters."

The Gordo producers one of the best, if not the best, dried table Raisin.

Doubtless the careful handling required and the long period of drying is the cause of the small pack of the layers, but we must exploit every avenue open to us if we would develop our fruit industry to the full and retain our markets.

* * *

THE ALMOND.

The Almond was selling in England before the war at 10¾d. lb.; this is about the local price at the present time. Almonds can be grown profitably for a lower figure than that at present offering locally, consequently the export of the Almond would probably prove a payable proposition should the local price fall.

The Almond enjoys light, well-drained soils, requires little attention so far as pruning goes, a light thinning out every two or three years being sufficient to keep it cropping regularly. Many varieties fruit to perfection in the Murray Valley, especially where irrigation is practised. Those giving the best returns

are probably Ne Plus Ultra, White Nonpareil, and Commercial.

These trees do not give the best returns planted in solid blocks, but rather as headland trees, where they serve the dual purpose of windbreaks and profit earning.

* * *

THE PEAR.

The Pear grows to perfection in the irrigation centres, and will possibly prove a valuable fresh export line where direct rail communication is established between the district and the seaport.

As a dried product nothing is more delightful than the Pear, especially the Williams' variety. Why sales are slow is hard to understand; the writer believes that the Pear will one day command the sales the fruit deserves. Only the best bright coloured dried article should be placed on the market if the buyers' confidence is to be won.

* * *

SUITABLE PRUNE VARIETIES.

The Prune is gaining favour where the land is suitable to tree culture, but heavy planting in the mid-Murray Valley is a debatable question at the present time. The cooler districts produce a Prune of higher grade than the hot areas and from that point one will look for the greatest plantings in the non-irrigated areas. The varieties which will be found payable under the Murray conditions are D'Agen, Robe de Sargeant, and Splendour. The greatest number of trees set out should be D'Agen, followed by Robe de Sargeant.

COTTON.

This crop has been constantly before the public for the last 18 months or more, and experiments have shown that Australia can produce cotton equal to that grown in any part of the world. In the Murray Valley the area under Cotton will rapidly increase from season to season. The long stapled Pima variety is proving too long in maturing for the Murray, consequently some of the shorter stapled varieties which mature in five or six months, will probably be found more profitable. The varieties showing promise in this direction are Durango and Webber's 49.

As a pot boiler for planting between newly-planted trees and vines, two rows between each two rows of trees and one between two vine rows, will be found to give good returns for the labour and time spent in tending to the plants.

* * *

THE EXPORT GRAPE.

In the near future the irrigation settlements will be sending away Grapes in large quantities. The Ohanez or Daria at present takes pride of place in the export trade, but probably other varieties will be found that will also prove profitable.

Cross Fertilisation of Fruit Blossoms.

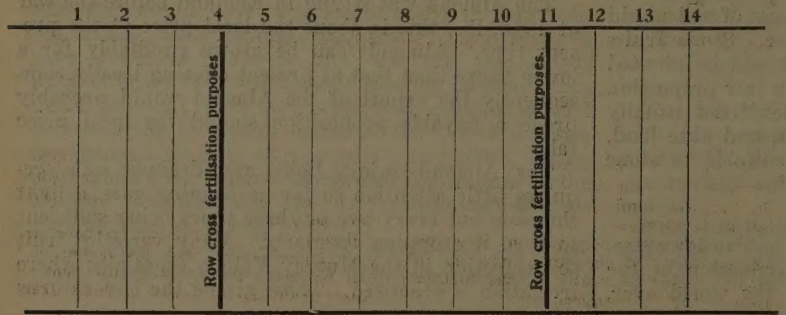
IT has been proved now that certain sorts of Apples and Pears require other varieties planted near to fertilise them. In Apples, it has been proved that Jonathan will not set its fruit unless other varieties are planted near it. In planting large numbers of Jonathans, we would recommend that every fourth and eleventh rows should be planted with the sort required for fertilisation purposes, (write Messrs. John Brunning & Sons, Fruit-tree Nurserymen and Fruitgrowers, Somerville, Vic.)

The sorts we would recommend to fertilise Jonathan are **Rymer, Stone Pippin,** Reinette du Canada, Alfriston, **Chandler, Sturmer Pippin,** Munro's Favorite, **Rokewood, Tasma and Granny Smith.**

Where the dark line appears below it would be better to have two sorts, as one pollenises the other and they, in turn, pollenise the Jonathan making better crops for the sorts concerned. This would apply equally well with all kinds of fruit trees. We have Tasma and Granny Smith for Jonathan. The diagram shows how a large commercial orchard could be laid out.

In this district Jonathan being the main variety, the diagram illustrates the position exactly. If other varieties were planted in quantities, different varieties would be necessary for pollination purposes.

PLANTING DIAGRAM.



London Pippin (Five Crown) is a favorite here for Rome Beauty. [We hope to publish shortly a list of the blossoming dates of other varieties., Ed., "F.W."]

In Apples Gravenstein, though blooming at the same period, does not pollenise Jonathan.

Pears.—Keiffer's Hybrid, we find requires pollinating with the Beurre de Anjou, Howell, Twyford or Monarch or Clairgeau to be a successful bearer. At present we are experimenting with the Williams, Winter Cole, Nelis, Packham's Triumph for results.

In **Plums,** for Grand Duke we find Pond's Seedlings and Prune de Agen about the best.

APPLES IN CANADA.

Big Export Figures.

Recent official figures show that in 1907 the exports of Canadian Apples totalled 38,811 barrels; in 1921 the quantity had increased to 1,358,499 barrels, and in 1922 to 1,845,955 barrels (value £1,770,900. The production of Apples in Canada in 1921 was 4,046,813 barrels, and in 1922 it was estimated at 3,625,850 barrels—a barrel contains nearly three bushels.

Fruit Storage and Shipment Problems.

English Scientists Visit Australia

"Brownheart" Studied and Elucidated

"Australia Should Export Peaches in Commercial Quantities."

AUSTRALIA WAS HONOURED, in the early part of this year, by the visit of three English scientists, who came to study at first hand the conditions of Australian fruit shipping, with a view to preventing a recurrence of "Brownheart," which trouble developed in many of last season's Apple shipments.

The party consisted of Dr. Ezer Griffiths (leader), Mr. E. A. Griffiths, and Mr. A. Smith. They visited several Australian States, inspected orchards and cool stores, and witnessed the loading operations. Finally they returned to England by different steamers carrying fruit—Dr. Griffiths on s.s. "Ormonde," this ship being with the Air Circulation system of cold storage; Mr. Smith on the s.s. "Somerset" (Grid system); and Mr. Griffiths on the "Themistocles" (Battery system).

This enquiry is being carried out by the Food Investigation Board of the Department of Scientific and Industrial Research, England, in conjunction with the Cambridge School of Botany.

Dr. and Mr. Griffiths are attached to the Department of Scientific and Industrial Research (National Physical Laboratory), whilst Mr. Smith is of the personnel of the Low Temperature Station at the Cambridge University. This Low Temperature Station is financed by the British Government, but is controlled jointly by the Government and the Cambridge University.

The expenses of the present investigation are being borne by the British and the several Australian State Governments.

The report which is being drawn up by these scientists will first be presented to the authorities before being made public.

The cold storage chambers of the ships on which the scientists are returning to England are fitted up with delicate instruments which record not only the temperature but also the humidity and the quantity of carbonic acid gas present. These instruments are connected with indicators in another part of the ship, under the immediate observation of the scientists, thus enabling them to make observations and log entries without entering the holds to obtain the information.

There are several troubles affecting fruit in storage and transit, for instance, bitter pit, scald, internal browning, and brownheart, all distinct. The principal trouble last season was with "brownheart," and it is now definitely known that this was due to an excess of carbonic acid gas in the ships' cold storage chambers.

Whilst carbonic acid gas in excess causes severe damage (or "suffocation," as it has been aptly termed), yet, in moderation, carbonic acid gas is beneficial, and fruits have by this means been kept for long periods without the necessity for cold storage.

It is well known that many varieties of Apples will keep for fairly long periods without cold storage, but when tests were conducted along the lines just indicated, varieties were selected having notoriously short keeping qualities, as well as those having a normally longer life. In all the "carbonic acid gas" experiments, Apples were kept for check purposes, in ordinary storage cellars, in orchard storehouses, and in cold stores; the results demonstrated most emphatically that storage by the aid of carbonic acid gas was a valuable commercial proposition.

What actually happens is that the carbonic acid gas in small concentration (say 10 to 12 per cent.), has a sort of narcotic effect on the vital activities of the Apples, similar to the effect of a fall in temperature.

The scientists engaged in these investigations are the same who so recently visited Australia in the furtherance of their researches.

The opinion is firmly held that it should be possible to ship commercial quantities of Peaches and other soft fruit from Australia to England.

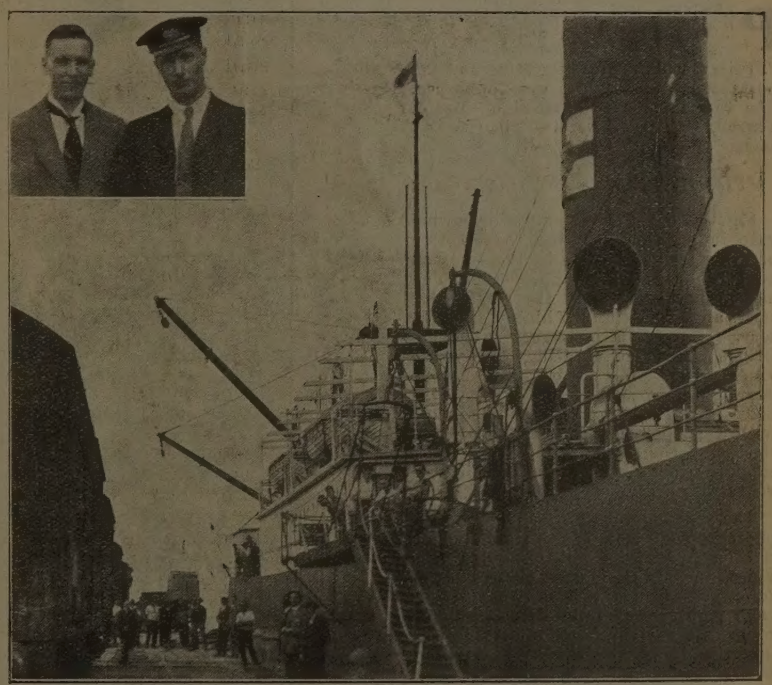
This matter, of course, needs close investigation, but the fact that such an opinion is held is of the highest importance and not only justifies but demands further experiments along these lines.

The photos. herewith show the s.s. "Somerset," on which a substantial consignment of fruit is being carried to England, under investigation; inset are Messrs. A. Smith (Cambridge Low Temperature Station), and W. H. Parker (chief engineer).

* * *

The only regret in connection with the visit of the English scientists to this country was that the opportunity was not provided for these talented gentlemen to officially meet the executive men at the head of the fruit industry. Growers generally would have welcomed the opportunity of meeting the scientists socially, and it would have been an easy matter, had their itinerary been known, to have arranged a dinner function, or a conference. The Victorian Fruitgrowers' Central Association or the Australian Conference of Fruitgrowers would have been delighted with the opportunity for honouring these visitors, when the broad objects of their mission could have been more clearly expressed.

However, it is hoped that these investigations which have now commenced will be continued to the betterment of Australia's export trade in fresh fruit.



Loading fruit into s.s. "Somerset" at Williamstown, Vic. The refrigerated chambers were fitted with scientific instruments to record temperature, humidity, and density of carbonic acid gas. Inset—Messrs. A. Smith (Cold Storage Scientist), and W. H. Parker (Chief Engineer).

Passion Fruit Cultivation is Profitable

The Victorian Industry Described.

By J. Farrell, Orchard Supervisor, Victorian Department of Agriculture.

The Passion Fruit vine needs skill in cultivation. Mistakes cause loss.

The article herewith deals in a practical manner with the cultural methods necessary for success. Training the young vines (as described and illustrated last issue), and pruning (as now described), have not in the past received sufficient attention.

Together with correct cultural methods and consequent increase of crops, there must be better organisation amongst the growers to extend the present markets and develop new avenues of trade.

(Continued from page 131 April "Fruit World.")

PASSION FRUIT culture has big commercial possibilities in Australia. In the last issue of the "Fruit World" many interesting and important cultural details were published. The theme is now continued by Mr. J. Farrell, Orchard Supervisor, in the Victorian "Journal of Agriculture"—

PLANTING AND TRELLISING.

Figure 5,A. shows a two-year-old vine in position awaiting the erection of the trellis. This is the method adopted by Mr. P. S. Chipperfield and most other growers in the Silvan district, and it has proved highly satisfactory. Success also accrues to Mr. J. Briggs' mode of treating the young vines. Here the seedlings, when one year old, are transplanted from the beds or drills into rows 3 ft. apart, with 1 ft. between each two plants in the row; then one stake is used to support each pair of vines until two years old, as shown in Figure 5,B.

The seedlings in the illustration were photographed just prior to being planted out. Mr. Briggs raises his own vines, and his method of planting is as follows:—The stake is drawn out, and each plant is carefully lifted, with its roots and soil intact. In this way growth is only slightly retarded, whereas when vines—particularly two-year-olds—are introduced from another nursery or district, they usually suffer considerably in transit. Tests were made when planting by placing the passions in pairs, but this method proved unsatisfactory, and was abandoned in favour of the single vine.

It is therefore advisable, if at all practicable when planting, to run the rows north and south so that the morning sun may shine on the east side of the trellises and on the west side in the afternoon.

Many kinds of vine supports, such as wooden frames, upright posts with cross-pieces, lattice-work, &c., tried in the past and proved unsatisfactory, have been abandoned in favour of the wire espalier. Experiments are being carried out, however, to further test the efficiency of modified forms of the wire trellis, and these methods are being tested in Mr. A. Baker's orchard at Wandin.

One of these consists of a row of rough split 4 ft. posts 12 ft. apart, along the tops of which two parallel wires are fastened two inches apart. A four-foot stake between each two posts conducts a single stem vine to the wires, along which the leaders are trained, as shown in Figure 6. In the other type the posts are longer, and a twelve-inch cross-piece of 2 in. x 1 in. hardwood is nailed four feet from the ground to each post. The cross-piece supports two parallel wires in saw-cuts ten inches apart. Stakes are used in this

A. B.

Fig. 5.—Stakes supporting young vines.

case also to guide the vines to the wires, on which the branches are placed similarly to those in Figure 6.

As the vines develop and the leaders creep along the wires, the fruit laterals will be suspended beneath, and the results of this method of trellising in Victoria will be watched with interest.

. . . . .

PRUNING

The Passion Vine, being a gross feeder, grows rapidly; the soil should be kept well worked, and liberally manured where necessary. The vine begins to produce fruit when two years old, but this does not retard its growth provided thorough soil cultivation be practised; in fact, precocious vines are preferable.

Pruning during the first three or four years consists mainly in regulating and directing the leaders which afterwards produce numerous superfluous light laterals. If these be not removed at the pruning, their subsequent maintenance causes the plant to become devitalized, and more easily defoliated by disease and frosts, particularly when cultivation, &c., is neglected.

With proper attention the vine usually reaches its maximum of fruitfulness when about six years old, and the retention of the debilitated willowy growths appearing after that time especially causes the feeding roots to become sluggish and to eventually cease functioning. Then the death of the plant, from what was formerly regarded by most growers as the effect of some mysterious cause, ensues.

The passion being an exotic, however, probably suffers also from other yet unknown disabilities. A much higher percentage of vines died in former years in the manner explained, when pruning was omitted, than during recent times when pruning has been more generally practised; pruning must now be regarded as a prime factor in passion-growing,

Reducing the superstructure of a reasonably healthy vine by removing the numerous useless lateral growths stimulates root action, and the sap is flushed to the several selected points of vantage. A smaller number of laterals appear during the next period of growth, but, although less numerous, the fruits produced on these are invariably more luscious and of finer quality than those of an unpruned vine.

The passion like the grape vine, develops its fruit on the succulent laterals produced during the currency of the same season's growth, and these laterals mostly come from leaf-buds on the previous year's wood. Most of the growers in the passion fruit districts, owing to their rather limited experience with the grape vine, are not thoroughly acquainted with its pruning needs, and are, therefore, somewhat slow in gaining a knowledge of the passion, which requires somewhat similar treatment in this regard.

During normal seasons and in suitable position, the matured foliage assists materially in protecting the leader wood and fruiting laterals from frost during the winter; **pruning, therefore, should not be commenced until the frosts are over.**

In pruning the established vine all the sickly or dead laterals are severed, at or near their base, from the main branches and sub-leaders. This is to flush the sap to the basal buds so that they may give out shoots, which, during their period of growth and development, yield the fruit for that season. The healthier laterals may be shortened back or be removed in the like manner, according to the condition of their buds and that of those at the base; but, generally speaking, practically the

whole of the laterals

may be removed. Dead or diseased leaders should also be cut out and suitably placed young gowths made to take up their places.

The main arms as well as the smaller growths sometimes become badly "frosted" during severe winters and often even in mild winters when the vines are grown in unfavorable situations. When it is plain that a plant suffering in this way or affected by fungi will have great difficulty in recovering, the best remedy is, when pruning, to cut all the leaders off at the crown. Then the latent crown buds will yield an ample supply of young growths with which a new fan may be constructed.

Pruning, to a great extent regulates the time of cropping. Unpruned vines blossom early and mature the first or heavy crop of the season, sometimes causing a glut and relatively low prices; whereas, pruned plants yield a later crop when higher prices are obtainable.

Fig. 6. Experimental Trellising.

Illustrations from *Victorian Journal of Agriculture.*

Soil Management.

The amount of cultivation needed by passion plots so that the best results may be obtained from same depends largely on the nature of the land and the weather conditions prevailing locally. Two ploughings a year are usually sufficient to keep the soil in a sufficiently loose state to enable cultivators and harrows to maintain its satisfactory condition of tilth. One ploughing to 6 or 8 inches deep, according to the depth of the surface soil, should be given as soon as possible after the first autumn rain.

On this occasion the soil should be drawn towards the rows of vines on both sides, so that the furrows formed between the trellises and running with the fall of the land may carry away the surface water during winter. Where the soil is heavy and tenacious, it should not be further broken up by harrows but allowed to remain in the rough state to become aerated and pulverized by the influence of winter weather conditions.

When with the
arrival of spring
the desired alteration in the soil has taken place and the land becomes sufficiently dry, it should be harrowed down prior to being ploughed again. On this occasion the furrow depressions should be filled in by drawing the soil away from the vines, thus restoring the level surface which existed prior to the autumn ploughing.

No time should be lost after the spring ploughing in bringing the soil into a fine state of tilth to conserve the soil moisture for the vines during summer, as the more suitable passion soils part with their moisture quickly except intensive cultural measures are taken.

The "spring-tooth" cultivator should be frequently used during summer and particularly after rains or irrigation. It often happens, however, that owing to pressure of work or lack of the necessary assistance, cultivation after rains has to be omitted; then the use of the disc cultivator becomes imperative.

Some of the more friable red soils lend themselves to intensive cultural treatment even during winter, and when fairly rich and in nicely-sheltered warm positions the passion shows its appreciation of these. This feature is more noticeable when the vines are growing on virgin soil than on previously cultivated land.

When ploughing and cultivating, great care should be exercised
not to damage the bark
of the stems or branches of the vines with the implements, as the spores of fungi often find a lodgment in the wounded parts, sometimes causing the death of the plants. There are no cultivated orchard plants more easily injured than passion vines. They often suffer considerable damage by having branches broken and portions of the bark removed from their stems by projecting ends of the old-fashioned swingle-bars and long trace chains still used by some growers. The chances of injury to the vines may be reduced to a minimum, however, by employing modern orchard harness.

The fact that the passion vine, being a greedy feeder, invariably responds well to good cultivation cannot be too frequently emphasized, as this phase of its culture is so often neglected. It should also be remembered that, as one-way working is imperative (cross-cultivation being precluded by the wires), and as the vine is an evergreen, the soil should be at all seasons of the year kept in as perfect a state of cultivation as local conditions will permit.

The vines, when left to their own resources or treated to shallow cultivation, become surface-rooted, producing a high percentage of their roots in the surface soil. Deep working, from 6 to 8 inches, according to the depth of the surface soil, so necessary for the passion plot, counteracts this objectionable condition, and trains the roots to function below the reach of cultivating implements.

No crops of any kind, particularly cereals and cabbage, however well tended, should be grown among the vine. Not only do these crops deplete the soil of the vines' essential food, but they also monopolize the air spaces between the trellises to the detriment of the passions. Although this practice has demonstrated many undesirable results, there are growers who still persist in it, but there is evidence of its future discontinuance.

Old strawberry patches, as soon as

Fig. 7. Planting Passions among the Strawberries.

the bushes cease to produce remunerative crops, are sometimes planted with passions. Fig. 7 shows Mr. Waring's passion plot at Silvan (Vic.) being extended in this manner. When the strawberries begin to "go off," the yearling vines are planted out and tied to stakes, as shown in the illustration, and usually the following year the trellises are erected. When the strawberries lose their commercial value they are ploughed in, and the land utilized solely for passions.

VINE STOCKS.

"Vigneron" Griffith, writes:—Just at present we are all very doubtful about the 1202 resistant stock.

This is the position—There was a great shortage of the A.R.G. No. 1 G-Resistant Stock, and the 1202 were recommended for grafting Ohanez, Cornichon and Waltham Cross.

The results so far are not very encouraging—apparently there is no affinity between the Ohanez and the 1202 (Mourvedre X Rupestris)—and where Sultanas have been worked on to them the vines have an unhealthy yellow tinge in them.

Answer (by F. de Castella, Victorian Government Viticulturist.):—

Mourvedre X Rupestris No. 1202, is a good stock for scion vareties which suit it. It is, however, somewhat difficult to suit in this respect. It certainly does not show the same "all round" affinity for European scions as A.R.G.1., for example.

This last seems to do well when grafted with all usual varieties (wine or table) with the exception of Gordo Blanco, for which it is not well suited.

No. 1202 has, in Victoria, been chiefly used as a stock for wine grapes, several of which do quite well on it. It has not yet been extensively used as a stock for table gapes. Our experience with this stock at the Rutherglen Viticultural Station bears out your correspondent's opinion. It shows poor affinity for both Zante and Ohanez. Sultana, on the contrary, does very well on it; likewise Waltham Cross and Purple Cornichon. The two last, however, have not been grafted long enough to prove the durability of the union.

Answer (by H. L. Manuel, N.S.W. Government Viticulturist.):—

Resistant stocks have not been sufficiently tested under Australian conditions.

The 1202 has proved in all other parts grown to be a very good stock, particularly for certain wine varieties, grown around Corowa and Rutherglen districts of Victoria. It is also used extensively on the Table grape areas around Sydney. The unhealthy yellow tinge mentioned may very likely be due to soil trouble. such as salt etc., or vines in need of a drink during a hot spell.

Another stock that may be tried for the Cornichon and Ohanez, and Waltham Cross at Griffith, is the 3306. Du Lot is a good stock for both the Cornichon and Waltham Cross, but is a stock that will not stand an excess of water, also will not stand up to dry conditions.

DRIED FRUITS.

English Marketing Offer.

A representative of an English firm of dried fruits agents recently visited Red Cliffs, Vic., and interviewed settlers with regard to the establishing of packing sheds and handling the settlement's output.

Details provide that the settlers are to sign an agreement to deliver each about 150 tons of fruit to the firm's packing sheds, which, although they may be co-operative, will be controlled by the firm, **with a view to grading fruits to the best advantage for London market.**

The present system of grading, it is stated, does not give growers full returns for their fruits The company offers to sell on 10 per cent. commission, this charge to cover all expenses except handling charges, such as rail to the seaboard, shipping freight, insurance, storage, etc.

As regards joining the Australian Dried Fruits' Association, this is a matter in the opinion of the company for the settlers to decide, the company being neutral on this point, but is prepared to abide by the decision of the settlers. If they were for the A.D.F.A., the firm would submit to the A.D.F.A. conditions, and the settlers must then pay all association allowances and commissions. The company's proposals are being referred by settlers to a committee for a report; the general tone of the settlement is sympathetic towards the A.D.F.A.

DRIED FRUITS HARVEST.

Mildura.

The total district tonnage of dried fruits delivered at the packing sheds to April 19th is slightly less than 15,000 tons, which is more than 1,000 tons greater than the whole of the dried fruits pack for Australia in 1921, and 4,500 tons less than the Australian pack in 1922. The crop from this district alone, after allowing for some 1,500 tons which, it is estimated, is yet to arrive at the sheds, will be nearly 4,000 tons more than the whole Victorian crop last year. The increase may be accounted for by the good season, ideal harvesting conditions, and the growing and bearing capacities of three, four, and five years' old soldiers' blocks at Merbein West and Birdwoodton. These figures take no cognisance of the fine Doradillo harvest, which has returned much better prices from the distilleries this season.

RAISINS IN TINS, FOR EAST.

The possibiltiy of marketing dried fruits particularly Raisins, in the East, when put up in suitable packages is illustrated by the following information:—

In order to extend the market for Raisins in tropical countries the Sun-Maid Raisin Growers (U.S.A.) are packing Raisins in cans. Canning will eliminate loss by shrinkage. Raisins, so far as is known, were first packed in tins on a small scale by the King's Packing Company at Armona three years ago. The King's Packing Company is expected to pack at least 50 thousand tons of Raisins in cans this year, and if the demand for the cans warrant it, the packing of Raisins in tin cans will be increased next year.

AMERICA'S EXPORT OF RAISINS.

American exports of Raisins during the first eight months of 1922 were four times as great as for the corresponding period last year, according to the Department of Commerce. Up to November 1, 1922, the exports have amounted to 29,475,417 pounds, valued at £900,800, while during the previous year the number of pounds exported was 7,274,334 valued at £297,700.

IMPORTS OF RAISINS INTO THE UNITED STATES IN AUGUST, 1922.

From	Pounds.
Greece	5,600
Spain	264,754
Argentina	47.604
Chile	680
Greece in Asia	203,905
Palestine and Syria	945
British South Africa	483,380
Total	1,006,868
Value	£16,600

DRIED FRUIT PRICES.

Melbourne (14/4/23)—

Trade in leading lines of dried fruits is reported to be satisfactory. Prices of new season's Lexias have been declared, and are 1d. a lb. below those of last year. Prices of Sunraysed fruits are as follows:—Currants, 3 cr. 7⅝d., 2 cr. 6½d.; M.F. for manufacturers only, 6d. Sultanas, 3 cr. 11½d., 2 cr. 11¼d. Lexias are quoted at 5 cr. 9d., 4 cr. 8¾d. Seeded Raisins, loose 9d., packets 10/3 to 10/6 dozen. Apricots, 4 cr. 1/7, 3 cr. 1/6, 2 cr. 1/5, 1 cr. 1/3; plain 1/-; slabs, 1/4; whole Apricots, 4 cr. 1/-, 3 cr. 11d., 2 cr. 10d. Nectarines, 4 cr. 1/4, 3 cr. 1/3, 2 cr. 1/2, 1 cr. 1/-; plain, 10d. Peaches, 4 cr. 1/2, 3 cr. 1/1, 2 cr. 1/-, 1 cr. 10d.; plain, 9d. Pears (28 lb. boxes), 4 cr. 1/4, 3 cr. 1/3, 2 cr. 1/1. Pears (14 lb. boxes), 4 cr. 1/4½, 3 cr. 1/3½, 2 cr. 1/1½. Pears (7 lb. boxes), 4 cr. 1/5; 3 cr. 1/4, 2 cr. 1/2. Muscatels, 6 cr., trays, distributed at 1/10½ lb., 4 cr. 1/9½, 6 cr. cartons, 23/- a dozen; 4 cr. 22/-. Tasmanian dried Apples, to arrive, packets 13/6, loose 10¾d.; Victorian loose 9½d. lb. Californian Figs, 4 oz. 5/- doz., 6 oz. 6/6. Prunes, to arrive, 10¾d. lb. Dates, 4½d. to 4¾d. Walnuts, Chinese, 1/- a lb. Sicilian Almonds, 3/- to 3/3; softshell, 1/6; Jordan, 4/-; Barcelona nuts, 1/4½; Peanuts, 1/-; Brazil nuts, 1/-.

Canned fruits are in moderate demand. Apricots are quoted at 11/6, Peaches 11/6, Pears 13/6, Pineapples 11/- to 11/6, and Tomatoes 10/6.

Market for Australian Fruit in China.

Americans Securing the Trade by Correct Packing and Organisation.

Big Opportunities Open in Australia if Trade is Properly Organised.

(By E. S. Little, Australian Trade Commissioner in China.)

The following is a copy of a letter received by Mr. Stirling Taylor, Director of the Commercial and Industrial Bureau of the Board of Trade, from Mr. E. S. Little, Australian Trade Commissioner in China, Shanghai:—

Dried Fruits.

The American fruitgrowers' organisation dealing with dried fruits was founded in 1912, in which year it has a modest turnover of less than 15,000 tons of fruit.

This turnover has steadily grown until, in 1921, the crop was over 178,000 tons. The value of this crop exceeded £8,000,000. During that year the Association spent over £300,000 in advertising.

In the year 1922 the crop has grown to 225,000 tons. The estimated turnover was over £10,000,000. The sums spent in advertising aggregates during the year over £500,000.

Last year there were in California more than 14,000 growers as members—these were divided amongst 13 different nationalities. The association has established 46 packing and receiving plants employing 5,000 workers.

During 1922 the association has exported 22,000 tons, of which 3,000 tons were sent to the Far East. This Oriental market has remitted to America over £75,000 for cash sales during the year.

In 1926 it is estimated the organisation will raise a crop of 400,000 tons to the value of over £20,000,000.

The association, through its Far Eastern organisation, has established a hold in every important place in Japan, and are now busily engaged in doing the same in China.

I am sending you, under separate cover, a set of three samples of Raisins which I have this week purchased from a Chinese retail store in Shanghai, at the following prices:—

Sunmaid per packet, 15 ozs. net, 28 cents at 2/2=7¼d.

Delmonte per packet, 15 ozs. net, 25 cents at 2/2=6½d.

Australian, brand per pct., 16 ozs. net, 55 cents, at 2/2=1/2¼.

I shall be glad if you will please carefully compare the packages, that is the cartons and their get-up, the contents and the prices. All the samples have been subject to exactly the same kind of treatment, have made the same kind of tropical voyage and all are taken by ordinary sale from the shelves of a Chinese retail store on the Nanking Road in Shanghai.

I have to make the following observations with which I trust you will be in agreement:—

1. The Australian carton or container is not as attractively got up as its competitors. Generally this is true of all Australian stuff sent up. Australain exporters must exert themselves to put up the country's most excellent products in a more polished and attractive manner or they will never make headway against the well-turned-out productions of other lands.
2. Australian fruitgrowers must organise themselves in these markets if they are to hope to make any progress.

The fact that the American organisation was able, during a fraction of last year, to remit from the Far East a sum of over £75,000 net from sales after, presumably, paying administrative expenses and salaries, is abundant testimony as to the possibilities of the market.

I learn that this organisation is now vigorously prospecting the Straits, Java, Sumatra and the Islands generally. That is, they are operating at the very doors of Australia in markets which are peculiarly Australia's.

I am further informed the Association are either preparing to invade Australia itself or their advance agents have already arrived in the country. I have not been able to verify this last report.

In any case, it is quite evident we cannot afford to let these markets go by default. We can do as well as the Americans, but most emphatically we are not doing so.

Fresh Fruits.

The China market is consuming a yearly increasing quantity of fresh Apples, Oranges, Lemons and other fruits. As an illustration of the strides that are being taken I have to-day purchased in a first-class and expensive retail store 12 fresh Canadian Pears for 2/2.

The Australian fruit season commences just at the time the Chinese, American, Canadian and indeed all the Northern Hemisphere fruit seasons close: consequently the field is free to Australian suppliers. This market is capable of great expansion if it is properly and scientifically organised and systematically and regularly worked. Spasmodic efforts will give no permanent or encouraging results, and are not worth trying. The Australian fruit associations, with plenty of capital in support, must tackle this problem seriously if they expect to attain success.

Before even a start can be made it is an essential prerequisite that regular steamers with chilled chambers be put on the run between Australian and Chinese ports.

Commercial Items.

The Stanmore (N.S.W.) Preserving Coy. Ltd. (subscribed capital £92,879), in its first annual report shows that a net profit of £1,650 was made for the 12 months ended November 30. The directors state that all claims and outstanding matters in connection with the old company's affairs have been adjusted by the liquidators, with the exception of taxation items and consignments in America, in respect of which finality should be reached in the near future. The cost of re-organising the business has been heavy. Warehouses and offices have been rebuilt, and the directors say that as the plant and machinery have had special attention, the Stanmore factory is now one of the best equipped in the Commonwealth, and the cost of handling the 1923 turnover is expected to be considerably lower than during the period under review. Salaries, fees, interest, insurance expenses for the year absorbed £28,296; £850 was reserved for taxation purposes; and the profit of £1,650 is carried forward. The subscribed capital of the company is £92,879.

KYABRAM (VIC.) CANNERY.

In response to a deputation from the Kyabram Fruit Preserving Company Ltd., the Victorian State Treasurer (Mr. McPherson) has agreed to advance the sum of £5,000. The directors of the company state that this amount will enable it to pay off the whole remaining cost of the construction of the building and the installation of the plant.

Personal.

By the s.s. "Tahiti," leaving Sydney third week in June, Mr. R. L. Tombs, of Messrs. Tombs & Howcroft Ltd., cannery engineers, is making a visit to America. He will take the opportunity of getting in touch with the latest developments in the canning business, and will be in California during the height of the packing season there. Visits will be made to San Jose and Los Angeles in the south, and to Seattle and Portland in the north, from whence return will be made via Vancouver.

A particular object of the trip is to observe regards the canning of vegetables, the output of which in U.S.A. has reached a huge tonnage and economically bridges over the gap between the fruit seasons.

TASMANIA

Handling of Fruit — Brownheart Investigation
Orchard Tax — Color Grading Opposed — News and Notes

(By Our Special Correspondent.)

Exeter Fruit Show.—The annual fruit and vegetable show was again held at this centre, being the thirteenth event since its inception by the Tamar Farmers and Fruitgrowers' Association. Although the weather was not propitious, a good attendance resulted, and the function was very successful. Some fine exhibits of fruit were staged, especially in the case fruit section, and only very fine margins separated the successful exhibitors. The State Fruit Experts (Messrs. P. H. Thomas and H. A. Turner) officiated as judges and commented very favourably on the quality and get-up of the exhibits.

In the case fruit section, Miss F. Hodson, of Sidmouth, annexed the championship ribbon for four cases of Apples, wrapped and packed for Sydney market; whilst Mr. F. Walker, of Lalla, scored in the five cases of Jons. (2½ in.). Other successful competitors were Miss L. M. Saul, Hillwood; J. Bulman, Legana; O. E. Hall, Legana; and N. D. Wivell, Sidmouth.

Mr. P. R. Beauchamp, Rosevears, was successful in winning the blue ribbon and cup for six plates of export varieties, staging six splendid samples of fruit. The same competitor also carried off the honours in the "five plates of export varieties" class. Prominent amongst the other prize winners were:—F. Walker, Lalla; O. E. Hall, Legana; J. Bulman, Legana; C. E. Griffiths, Glengarry; and W. D. Weston, Exeter.

An exhibit which claimed much attention was a plate of new Apples, staged by Mr. F. Walker. These are known as "Improved Red Delicious," and are a very attractive Apple which are said to have all the qualities of the true Delicious, but are of better colour and appearance.

Rough Handling of Fruit.—A meeting was called at Hobart recently by the State Fruit Expert, Mr. P. H. Thomas, of shipping agents, stevedoring companies, and river steamers representatives, in order to try and effect some improvement in the methods of handling and stowage of fruit exported.

Fruitgrowers visiting the wharves have taken strong exception to the way that the fruit is bruised through careless handling; also the walking upon the sides of the cases in the ship's hold when loading.

After much discussion a resolution was passed that planks be used wherever practicable for walking upon cases of fruit in loading and discharging operations. Messrs. H. Jones & Co. have generously appointed an inspector to look after fruitgrowers' interests on the wharves in this respect, and to take action in cases of neglect as warranted.

South American Markets.—An effort is being made to again open up this market for Tasmanian Apples and Pears. It is hoped that arrangements will be made for a number of boats to again call at Hobart en route for New Zealand and South America to lift the fruit.

South America, with cities like Buenos Aires, Rio de Janeiro and Monte Video, offer a promising outlet for our fresh fruit and if the vessels can be induced to call, and consignments of good quality and "get-up" are forwarded, these markets should be developed and made a very valuable asset to the industry. In comparison to the Eastern markets a much bigger field should be open for exploitation as the States and Republics of South America are generally higher wage countries, and with reasonable costs our fruit should come within the purchasing range of the average artisan or labourer.

Colour Grading.—Tasmanian fruitgrowers note with some surprise the action of the Victorian State Fruit Advisory Board in trying to again get colour standards included in the Federal grading regulations. After the agreement that was reached between all States in this matter, it was hoped that at last a set of standards had been arrived at that was satisfactory and did not penalise any particular State in the operation thereof.

Tasmanian fruitgrowers have experienced the working of grades in which colour was included, and after a number of years the clauses in respect to this were withdrawn as being unsatisfactory and uneconomic.

The trend of standardisation has very much altered during the last few years in those countries where it is in operation and grades or standards are being reduced and made simpler.

It is the common mistake to inaugurate a new system with many embellishments and small details that are in the end found to be impractical and harassing.

The Australian Fruit Council should study the operation and changes in standards that have been effected in the different States of America and model on the lines that are applicable and satisfactory to all Australian States.

State Fruit Advisory Board.—A meeting of the board was held at Hobart on April 17th, 1923. Present:—A. Davies, Port Cygnet (chairman), E. H. Thompson (representing Jones & Co.), A Boatwright (Latrobe), T. J. Eddington (Bagdad), V. Skinner (Huonville), N. Campbell, M.H.A. (W. Tamar), H. D. Calvert (Geeveston), J. P. Piggott, M.H.A. (Pt. Huon Fruitgrowers' Association), and the secretary (P. H. Thomas). Mr. F. Walker was present by invitation.

Carriage of Fruit to Interstate Markets.—A letter was read from the Gordon Fruit Board requesting the members to try and effect some improvement in the ventilation of holds of vessels carrying fruit to interstate markets. An interview was arranged between representatives of the different shipping companies and the board. The various companies were represented as follows:—Union Co., Mr. Bliss; Huddart Parker, Mr. Furlong; Patrick Line, E. H. Thompson; State Shipping Line, E. Ward. Mr. Davies addressed the representatives, pointing out that there was great need of improvement, especially as it was now recognised that an efficient air circulation was a vital factor in the matter of fruit storage. Replies were received that the various companies would be pleased to consider any means by which the carriage could be improved, and requested the board to outline the methods by which they thought this could be effected.

Handling of Fruit.—The secretary reported that as a result of the conference called in regard to this question, replies had been received from most shipping agents stating that in future *planks would be used wherever possible to prevent damage from walking on the cases in loading operations.* It was moved by N. Campbell, seconded by A. Boatwright: That a minute be placed on record, marking the appreciation of the board in the action of Messrs. Jones & Co. in providing funds for the appointment of an inspector to look after fruitgrowers' interests on the wharves in the matter of handling and loading of fruit."—*Carried.*

Mr. H. Calvert also moved and A. Boatwright seconded: "That this board recommend that provision be made so that any fruitgrower or person connected with the industry may be appointed an honorary inspector for the purpose of exercising a control over the handling of fruit exported."—*Carried.*

"Brownheart" Investigation. — Professor Flynn, of the Tasmanian University, was introduced to the meeting by Mr. Piggott, and outlined the work that had been performed by Mr. F. Wakefield in the matter of investigating the conditions of carriage of overseas fruit. He expressed his opinion that the apparatus designed was very complete and if installed in one of the overseas vessels should be the means of obtaining valuable data for the industry. On the motion of Messrs. H. Calvert and J. P. Piggott, it was decided:

"That an amount up to £300 be apportioned from the Insurance Fund contributed by growers, for the purpose of carrying on the investigations of Mr. F. Wakefield, under Prof. Flynn, in regard to the carriage of fruit overseas, by perfecting and installing apparatus designed to register the conditions of carriage in ships' chambers."

It was further agreed that Messrs. E. H. Thompson, J. Piggott and P. H. Thomas be the sub-committee to assist and supervise this work.

At the invitation of the board Mr. F. Walker addressed the meeting in regard to the various matters affecting the industry, which he came in touch with dur-

ing his investigations in Europe and America. A vote of thanks was accorded to Mr. Walker for his valuable report, and it was requested that the Department of Agriculture have a number of copies printed for distribution.

Emergency Representative on Australian Fruit Council.—The secretary notified the board that a request had been received for them, from the secretary of Australian Fruit Council, to elect an emergency representative to act for the board in questions that necessitated prompt consideration. Mr. J. P. Piggott was nominated in this respect.

Beauty Point Shipments.—A report was read by the secretary from the Customs Department in regard to the lack of facilities for loading and inspecting fruit that was exported overseas from Beauty Point. The secretary was requested to bring these matters to the notice of the Launceston Marine Board.

British Empire Exhibition.—Correspondence was read from the secretary, Australian Fruit Council, in regard to

SWANN & Co.
Established 1822
A century's experience in handling
FRUIT OF ALL DESCRIPTION
All consignments for U. K. will have
Personal Supervision and Attention.
Account Sales and Cheques despatched immediately after sale
3, Salters' Hall Court, London, E. C. 4, England
Cables:—FIREBRICKS, LONDON
Bankers:—Bank of England
Australian Representative—
Chas. E. Howship, 129 Queen-st., Melbourne, and Surrey Chambers, Perth, W.A.
Victorian and Tasmanian Agents: Bailey, Baldwin Pty. Ltd., 552 Flinders Street, Melbourne.

an exhibit of refrigerated products from Tasmania, also as to suggestions for propaganda, etc. Messrs. E. H. Thompson, J. P. Piggott, and P. H. Thomas were appointed to go into this matter.

Bonus on Dried Fruits.—On the motion of Messrs. V. Skinner and H. Calvert it was decided: "That this board requests the Federal Government that the bonus which was formerly awarded on dried fruit products exported overseas be reintroduced."

Federal Grades.—A discussion followed as to the action of the Victorian State Fruit Advisory Board in trying to reintroduce colour requirements and alter the Federal grades for fruit exported overseas which had previously been agreed to by all States. Mr. Davies moved and Mr. Eddington seconded:

"That this board strongly resents the efforts of the Victorian board to alter the standards that have been mutually agreed to by all States in respect to overseas fruit exports. The board regards this action as a breach of faith and totally against the mutual co-operation in matters affecting the fruit industry."—*Carried.*

Mr. Boatwright further moved, and Mr. Thompson seconded: "That it be an instruction of this board to delegates attending interstate conferences to strongly oppose the introduction of colour grading."—*Carried.*

Inspection Fees on Fruit.—A letter was read from the Tasmanian Farmers, Fruitgrowers and Producers' Association, requesting the co-operation of the board in trying to effect a reduction in the State inspection fees on imported fruit by 50 per cent., owing to the increased volume of trade. The secretary was instructed to get into touch with the various State boards in order to try and effect this reduction.

Orchard Tax.—It was decided to request:

That when this matter is brought before Parliament the tax be imposed in the form of a case levy or quantity tax, as being the most equitable.

Election of Advisory Board.—The question of the future election of the board was discussed. Mr. Piggott moved and Mr. Boatwright seconded:

"That the election of the fruitgrowers' representatives on the board be carried out at the annual Launceston and Hobart conferences of fruitgrowers."—*Carried.*

Eat More Fruit.

Suggestions from Tasmania.

Fruit is not a luxury; it is a necessary part of the daily menu.

This doctrine should be unceasingly made known and great advantages would accrue to a nation as a whole. A well-known Tasmanian fruitgrower writes.

Apropos increasing fruit consumption, I have just taken charge of a boy immigrant from Paisley. There were 12 on the one boat, and 700 immigrants in all. Asked if they got many apples on board he said,—"One each on a Sunday." These vessels pass through the tropics, and fruit should form a prominent part of the daily menu—raw, stewed and baked. Apples and Cream (pasteurised) could be carried in the Cool Chambers, and freely used.

Personally I eat no meat, white or otherwise. Fruit, i.e., stewed or baked Apples and Pears form a large part of my diet, and I do much laborious work.

I think the attention of Shipping authorities might, with considerable advantages be directed to the advisabilty of taking aboard before leaving Australia, a good consignment of Apples and Pears. **The proverbial Apple a day amongst 700 passengers would mean a large Consumption.**

Apples, sliced and stewed in their own juice in an earthenware Casserole in a stove or oven, have a perfect flavour, and served with rice custard or some other milk pudding are delicious.

Fruit consumpton, and especially Apples, is far below what it should be. I met an English Commercial Traveller in Launcestion last week, and he said, Apples were dearer here than England. This is nothing short or scandalous.

Citrus Fruit to Manchester.

Growers and exporters of Oranges are directed to the value of Manchester as a market for their fruit. A population of 13,000,000 people within a radius of 75 miles is served from this port.

Gerald DaCosta

Head Offices:
5 & 7 Eastcheap, LONDON, E.C. 3
Importers and Distributors of all kinds of English, Colonial and Foreign Market Produce
BRANCHES:
Covent Garden, London, W.C. 2. Tel. Gerrard 868. Telegrams, "Geracost, London."
Spitalfields Market, London, E. 1. Tel. Avenue, 8804. Tel'g'ms, "Spitacost, Lond."
3, 4 & 5 The Arcade, Borough Market, London, S.E. 1. Tel. Hop 3373. Telegrams, "Borocost, London."
G.N.R. Potato Market, King's Cross, N.1. Telegrams, "Kincrocost, London."
3-5 Pudding Lane, Monument, London, E.C. 3. Tel. Avenue 7990. Telegrams, "Fruits, London."
18 Stanley Street, Liverpool. Tel. Central 888. Telegrams, "Geracost, Liverpool."
Southampton Docks (Facing No. 45 shed), Tel. Southampton 2207. Telegrams, "Geracost, Southampton."
American Branch, 202-4 Franklin Street, New York. Cables, "Geracost, New York"

Arrangements have been made for steamers to go direct from Australia to Manchester.

Further particulars about this matter are obtainable from Mr. N. V. Wade, Australian and Southern Tasmanian agent for the North of England Fruit Brokers Ltd., whose address is 8Bridge Street, Sydney, N.S.W.

* * *

The letter was, undoubtedly, composed very badly, and the manager reproved the clerk who had written it.

"A man who does not make himself understood is a fool," he said. "Do you understand me?"

"No, sir," the clerk replied.

Experimental Shipments of Soft Fruit to England.

Report on Out-turn and Prospects.

Details of experimental shipments of soft fruits arranged by the Victorian Department of Agriculture are to hand from Mr. E. W. T. Adams, Victorian representative for T J. Poupart, Ltd., who handled the shipments. Messrs. Poupart Ltd., report as follows:—

Peaches.—The general condition and appearance was excellent, and the fruit was of good colour, firm, and showed very little bruise. The fruit, however, upon tasting proved flavourless, and it was assumed that the Peaches had been carried at too low a temperature, the fruit cells being broken down, some of the specimens being like sponges. It was thought that possibly the fruit might defrost satisfactorily, and a special test is being made by placing some of the Peaches in a temperature of 65 deg. Fahrenheit, and the outcome of this is now awaited. The engineer's log of the "Hobson's Bay" states that the whole of the fruit was carried at a temperature of 33 deg.; and that being the case it can only be concluded that the fruit was subjected to excessive pre-cooling before shipment.

Packing of Peaches.—The boxes were quite satisfactory, but were somewhat larger than the South African boxes, which we would recommend as a type, though it would be well to have a distinctive package. It will be found necessary to carefully grade the fruit, and to pack certain standards, say 48, 54, or 60 Peaches to the tray box. In the experimental shipment both large and small were packed in the same box. It would be advisable also to label the box at one end, giving particulars of the "count" of fruit, the variety and the grower's name and brand; also that of the salesman to whom the fruit is directed. At the opposite end of the box should appear the salesman's brand or initials, or the shipping number as is now being used, that is if the shipping companies prefer. Nothing whatsoever should appear on the top or lid of the boxes.

Paper lining the cases is quite unnecessary, but each fruit should be wrapped in tissue paper, not waxed paper, and each fruit insulated, not only on top, bottom and sides of the box, but from the other fruits in the same tray box, by an insulation of the finest cut wood wool (aspen). This would prevent bruising, and, furthermore, prevent any single fruit that might go rotten, from affecting and deteriorating its neighbour.

In the experimental shipment only one grower, viz., W. A. Webb, of Doncaster, entirely insulated his fruit.

The trays should not be battened together in 3's, but sent separately; they travel better, and do not become damaged, as they easily may, by the hammering necessary to cut the metal binding, to separate the trays.

A batten ½ inch thick upon the two top ends of the tray box is recommended, to allow of air circulation.

Double wrapping Peaches is no advantage, and is not recommended, neither should the fruit be sent unwrapped, as small pieces of wood wool adhere to the skin, and have to be removed with a small brush, which might effect the removal of the skin, and spoil the appearance of the fruit.

An effective design or brand is recommended to be printed on the fruit wrappers, and if printed in "red ink," gives a pleasing effect to the pack when displayed to buyers.

Treat the fruit as a delicacy, and for the high-class trade, so as to get the best results.

Plums.—Watson's Balena and Watson's Burbank Plums were sent, but turned out unsatisfactorily.

Plums should be packed in exactly the same way as Peaches, except that Plums having a much tougher skin may be packed side by side without insulation separating the fruit. Of course, a sufficiency of aspen wool must be used to prevent the fruit touching any part of the tray box.

Pears forwarded were unsatisfactory, and not up to standard. These should be packed exactly the same as the Plums, carefully graded to size. It is unnecessary to insulate the fruit separately from its neighbour.

Apricots.—The specimens received were very small, and had no appearance. There is a limited demand in England for "fresh" Apricots, and therefore the fruit must be of the best quality, and of large size, and fit to appear as "dessert" on the tables of those who specially appreciate this fruit.

Apricots should be dealt with exactly the same way as Peaches, the fruit being separately insulated with wood wool.

Prospects for a Market.—As the Victorian deciduous fruits arrive at the same time that South African arrivals are at their zenith, every care is therefore necessary that the Victorian fruits are well selected, graded for size and uniformity, and packed at least as well as the average South African, from which country the strongest competition must be expected, otherwise results will not be altogether satisfactory. There is no reason why, with careful attention to these matters, that a highly satisfactory trade should not be developed, and satisfactory prices obtained, but special emphasis must be made upon the special points above referred to.

BRITISH EMPIRE EXHIBITION.

Arrangements are well in hand for comprehensive exhibits to be arranged for the British Empire Exhibition, which is to be held in 1924. A commission is operating in each State in conjunction with the Federal Bureau of Commerce and Industry. Fresh, dried, and canned fruits are to be displayed extensively and it is hoped that sufficient support will be forthcoming.

Airless Storage.

A New Method of Fruit Preservation.

Successful Shipments to the East.

Several months ago the *Fruit World* announced that a new system of "airless storage" had been successfully tested, and that various soft fruits, meat, fish, and even flowers, had been kept fresh for a surprising length of time. On opening the containers and exposing them to the air the fruits, etc., had the same term of life as was natural to them prior to being stored.

The vacuum process of storage has been known for ages, but the application for commercial uses has not been widely adopted because of the excessive costs connected with creating and maintaining the vacuum.

The "Greig-Allen" system of airless storage is the commercial adaptation of the principle of storage in a vacuum, the patent process being that of economically extracting the air thus creating the vacuum.

On March 24th, at the convention of the directors of Airless Storage Pty. Ltd. and Messrs. H. Louey Pang & Co., a large party of exporters, growers, and interested business men witnessed the first consignment of fruit being prepared for despatch by the s.s. "Victoria" to Hong Kong, China, by the new process.

The shipment consisted of Apples, Pears, Grapes, Pineapples, Bananas, Oranges, and Lemons. The cases of fruit were placed in four steel containers, 7 ft. x 5 ft. x 5 ft; after being hermetically sealed the air was withdrawn by the Greig-Allen patent process (water pressure, and non-expensive).

Speaking to the assembled gathering, Mr. Pang remarked that China's annual imports of fresh fruit was over £1,000,000, and of this sum Australia's share was a few thousand pounds' worth only. If this system proved satisfactory it would greatly assist in the development of Australia's fresh fruit export trade.

On 7th April a cable was received from the s.s. "Victoria" at Thursday Island:—

"Opened Nos. 1 and 4, mixed fruit excellent and much appreciated, Apples splendid."

Later, on arrival at Hong Kong, a cable was sent to Messrs. Pang & Co. stating that all the fruits were landed in satisfactory condition, except the Apples. The latter part of the cable is surprising, as if soft fruits will carry satisfactorily, it certainly is much easier to carry Apples.

It is thought that possibly the cable advice has been mutilated, and letters are now awaited giving actual details.

It may be safely stated at this stage that a distinct advance has been made in the method of carrying fruit to distant ports per steamer, and great hopes are entertained for the complete success of the method and the commercial application of same.

Parasite for Woolly Aphis.

Valuable Investigation in New Zealand.

Australian State Governments should have Insectariums to Breed Beneficial Parasites.

CAN the Woolly Aphis be controlled by the introduction of parasites, and thus eliminate spraying for this pest?

If so, thousands of pounds sterling will be saved for the Australian and New Zealand fruitgrower.

There has been introduced into New Zealand the Aphelinus Mali, a valuable parasite of the Woolly Aphis. Investigations are being conducted, and the results are being watched with the closest interest.

The first specimens of this parasite were introduced from America by R. J. Tilyard, M.A., Sc.D. (Canterbury), etc., Entomologist of the Cawthron Institute of Scientific Research, Nelson. N.Z.

In 1920 Dr. Tillyard visited America and arranged with Dr. Quaintance, Entomologist in charge of Fruit investigations at Washington, U.S.A. to forward consignments of parasitized Woolly Aphis. These arrived at Nelson by the s.s. "Tofua" on January 13th, 1921. The consignment consisted of six boxes of Apple twigs, being two boxes each from Washington States and the States of Connecticut and Arkansas, the idea being to obtain stocks of parasites from widely separated States, so that a strong breed would result.

Great care was taken in the breeding out of the parasites from the aphis infected twigs, and many disapointments were experienced, so much so that the history of the introduction of the parasite resolves itself into the story of the three male and two female specimens which were finally saved. The careful work put in with this small stock has been amply repaid as the distribution made in 1922, viz., 2,860 specimens, speak for itself.

There is no reason to believe other than that very great savings will be made by N.Z. fruitgrowers by means of the introduction of this parasite, provided of course, that proper provision is made to breed sufficient stock for distributing among the various orchard districts. The effectiveness of the work of this parasite can be observed from the accompanying illustration.

Seven parasites were liberated early in February, on a Cox's Orange Apple tree belonging to Mr. Duncan, one of the trustees of the Cawthron Institute; in less than a week, Mr. Duncan reported that the Woolly Aphis was fast disappearing. On examination shortly afterwards the tree was found to be practically free from Woolly Aphis.

To distribute the parasite 3,000 specimens have been placed in widely separated orchards in New Zealand. These experiments will yield valuable data.

In this interesting pamphlet on the subject, Dr. Tilyard states:—

"A number of Fruitgrowers' Associations have taken up this matter with keenness. It is hoped that every Fruitgrower's Association in the Dominion will avail itself of the opportunity of obtaining supplies from Nelson, so that the Aphelinus may become completely established throughout the fruitgrowing areas of the Dominion.

It is now established that these tiny insects can be sent by post safely to any destination in New Zealand. Consignments will be sent by arrangement.

Writing to the "Fruit World," on March 19, Dr. Tilyard states:—

I think the various fruit growing districts of Australia would be well advised to secure the introduction of this valuable little parasite. If any district is able to undertake the work of rearing and distributing them in a scientific manner, I shall be very pleased to send over twigs containing the parasite during the coming winter.

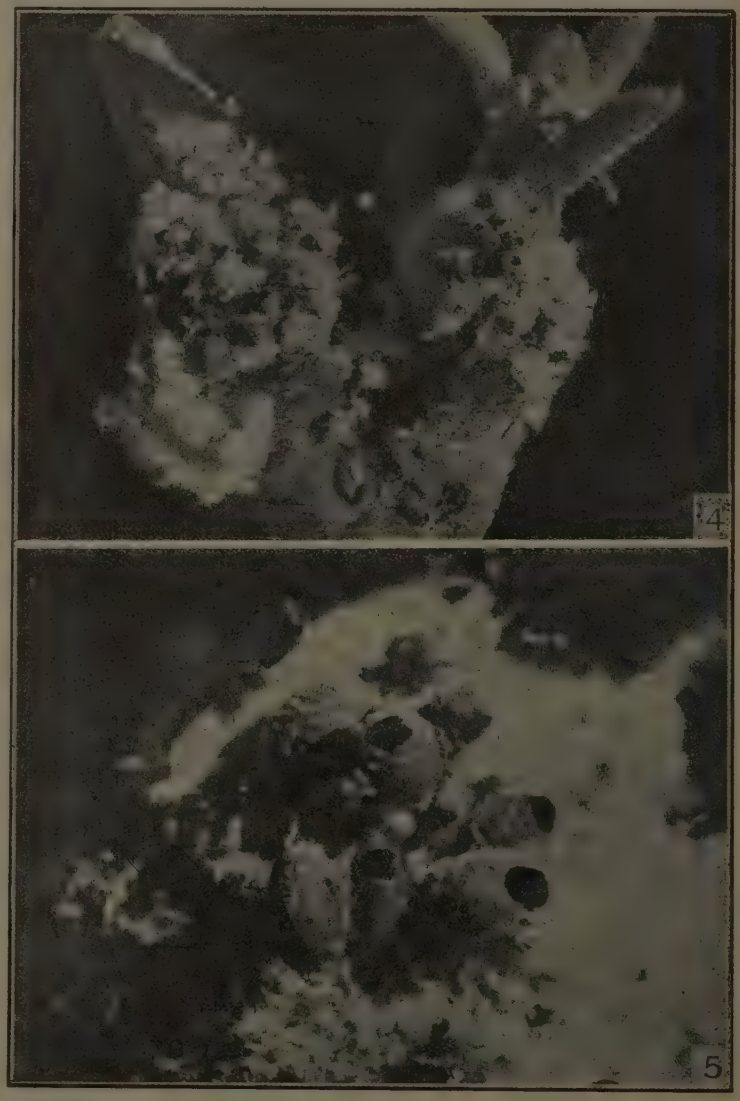


FIG. 4. TWO CLUSTERS OF WOOLLY APHIS PARASITISED BY APHELINUS MALI, × 4.

The larger cluster on left only partially parasitised; the smaller on right completely destroyed by the parasites, and with most of them emerged.

FIG. 5. THE RIGHT-HAND CLUSTER OF WOOLLY APHIS IN FIG. 4 SHOWN ENLARGED, × 10.

Notice the large round holes made by the parasites when emerging. An "Aphelinus" in the smallish aphis in the lower centre of the picture emerged suddenly just before the photo. was taken, owing to the great heat of the electric light upon it.

Fruitgrowing Under Irrigation.

Citrus Crop. Pruning Stone Fruits and Pears. Preparation of Land for Planting.

(By Our Special Correspondent.)

THE dry spell experienced during March and April has had a telling effect upon the citrus trees in many of the irrigated areas. The river being very low, the salt contents of the water was high, consequently it was inadvisable to irrigate.

The South Australian irrigation settlements will commence a special citrus irrigation from the middle to the end of April. Water has, and is, being let out of the Lake Victoria storage basin to flush out the river and to allow a fresh water supply for this special irrigation.

The citrus crop, on the whole, in the irrigation areas is very light and in all probability the majority of the fruit will be on the large side. The citrus association has decided to

export a proportion

of the crop, even though the supply will be limited, in order to retain the business connections made during the last two seasons.

The harvesting of the *dried fruit* crop is practically finished, with the exception of some of the late trays of London layers. On the whole the drying season has been a very good one.

In the early *Apricot* season, continued cold snaps with little rain hindered operations somewhat.

During the *Grape* season the days have been all that could be desired; towards the latter end of the season the nights became dewy and necessitated the covering up of the fruit each night.

Pruning of Stone Fruits.

The advice often given is—"prune heavily when a heavy crop is expected and lightly when a light is anticipated." Last season was a particularly good one for stone fruits, especially the Apricot, so a lighter crop may be expected this year, consequently a very heavy pruning is not advisable. Light pruning often becomes no pruning with some growers, but this practice of leaving Peach and Apricot trees unpruned is not recommended.

If one looks through their *Apricot* trees many spurs will be found to have died during the past season, owing to the very heavy strain the big crop of fruit had upon them. These should be removed during the winter's pruning and the many divided fruit spurs that are showing signs of deterioration should be thinned out and reduced back to strengthen the remaining fruiting wood.

In the *Peach* the spent wood should be reduced to the base, taking care not to damage the base buds; some of the new fruit shoots should also be cut back to force new growths from the base buds to provide fruiting wood for the following season.

In dealing with the leaders of the Peach and Apricot trees care should be exercised in selecting the wood for continuing the shape of the tree. Discrimination should be shown in leaving the

leaders long pruned

or pruned to definite buds. Long or unstopped leader pruning has become very popular during recent years, and in many cases it is carried to extremes; often the leaders are left untreated.

Only vigorous growing trees should be pruned to unstopped leaders and then where possible the leader should be cut to a healthy lateral growing in the direction that it is desirable to continue the arm.

* * *

THE PEAR TREE.

THE PEAR CROP was the lightest that has been experienced for some years on the river, so that a heavy crop may be looked for during the coming summer. The winter's pruning should tend to thin out the fruiting laterals and superfluous wood shoots. Dense trees may be opened out to allow the entrance of light and air to ripen the inside fruiting wood.

On young trees the laterals should not be topped but left long, as the end bud is often a flower bud. The flower buds may set a clump of Pears, as the fruit grows and increases in weight the twig is bent downwards. The flow of sap is checked, many of the buds along the lateral burst into leaf and produce small spurs which eventually grow into fruit spurs. When the fruit spurs are obtained the laterals may be reduced back to the desired number of spurs.

PREPARATION OF LAND FOR PLANTING.

In the irrigation areas all land should be properly graded prior to planting. On heavy lands the flooding system of irrigation is sometimes practised, the soil is then graded to a level surface. Where the furrow system is followed the land should be given a fall of about 4 to 6 inches to the chain. On hillsides of a sandy nature the grade may be increased to 12 inches to the chain and is sometimes even more.

Where the soil is inclined to be somewhat heavy and hard, subsoiling should always be practised and heavy applications of gypsum or lime should be applied during autumn. The gypsum and lime should be broadcasted over the surface of the soil. The gypsum is applied at the rate of 3 to 5 cubic yards per acre and lime at about 2 or 3 tons.

Where trees are being planted on "box" flats, in addition to subsoiling the holes where the trees are to be planted are sometimes "fired." The top soil is removed to 9 inches or so, an auger hole is then bored down to a depth of 18 inches to two feet. Into the auger hole is placed a

plug of gelignite

attached to a fuse and cap, soil is tamped over the gelignite until the auger hole is filled. The fuse is then lit, the resulting explosion opens up and cracks the surrounding subsoil for several feet.

Gypsum may then be placed in the hole and water should be directed into the holes prior to planting.

Should the trees be planted prior to watering, the settling of the soil in and around the exploded hole will subside and draw the trees too deeply into the soil. The land is irrigated prior to planting in order to allow the soil to settle so that there will not be a subsidence after the trees are placed in position.

In most of the newly-planted areas, unless special precautions are taken to prevent it, severe sand drifts occur which cut the young trees and vines, thereby doing much damage to the young plants. To reduce the sand drift to a minimum summer cover crops are recommended. Even the late planted wheat and oat crops give a great measure of protection as the strongest winds are experienced in mid-spring during the equinox.

The wheat and oats may be cut for hay when ready, but the stubble is left undisturbed until the following autumn.

Where summer crops are sown, sorghum, maize and Sudan grass will be found to provide good protection to the young trees and vines, the crops should be sown in September. These plants can be cut during the summer for fodder, cutting alternate rows at one time, thus leaving some measure of protection by the other rows. When the mown rows have grown again, the strips of cover crop not previously cut can be harvested.

Whether the crops be sown during the winter or late spring, the strips should not cover the whole of the rows between the trees or vines, but space should be allowed on each side of the rows to allow a single horse scarifier to work without damaging the trees or vines.

South Australia.

Exports and Cultural Notes

Mr. G. Quinn, South Australia, Government Horticultural Instructor, writes under date, March 27, as follows:—

Exports up to March 12th, 9,045 cases of fresh fruits of Plums, Pears, Grapes, Citrus and Apples have been shipped to various overseas markets since the beginning of the year.

As far as information is available, our total export of Apples and Pears should approximate to 20,000 cases for the season.

The shortage is due to failure of the Apple crop to set, and the premature ripening and falling from the trees of a large proportion of the crop, particularly of Cleopatra. This is due to the long dry spell since the end of last year, causing the soil to dry out in a most pronounced manner in spite of good tillage.

This peculiarity is somewhat surprising, as in this state we had a Winter rainfall for 1922 above the average, and soaking rains fell at intervals up to Christmas.

Notwithstanding the repeated scarifyings following upon each rain through the spring and early summer months the subsoil moisture has been lost more than usual.

To my mind this is probably due to the recurring rains making frequent contact with the subsoil moisture during the period when the ground was warm, and the evaporation was hastened unduly before the surface could be again pulversized, but—as you are probably aware—a Californian Professor has "pulversized" the so-called "capillary theory" of the movements of moisture in the soil.

The failure to set was probably caused by most unusually sudden outbursts of heat in October, when most pip fruit trees were blooming. This hatched out Bryobia mites in millions, and they helped to finish off the blossoms. Thrips were in evidence later—too late in my opinion to have taken much hand in the failure of the setting.

Oranges—There is only a moderate setting of oranges on the whole in this state.

SOUTH AUSTRALIAN FRUIT-GROWERS.

Half-Yearly Conference.

Speech by Minister of Agriculture.

The thirteenth half-yearly conference of the South Australian Fruitgrowers and Market Gardeners' Association was held at the end of March.

The Minister of Agriculture (Hon. G. F. Jenkins) said the success of the Government was dependent upon the success of the primary producers. Under the Advances to Producers Act the Government had assisted many small co-operative companies to establish cold stores. The Government had a great deal of money invested in the fruit industry in soldier settlements.

The industry was very important to the State. He estimated that the total value of the vineyard production last year amounted to £1,085,961. The average value per acre of vines in bearing was £35/9/2. The averages for the past five years were £1,070,673 and £38/10/9 per acre respectively. The estimated total value of production from orchards, apart from vineyards, last year was £658,894, against averages over the past five years £542,294.

The Minister said that the question of markets was of a great importance. He referred particularly to fruit for canning purposes, especially in the irrigation settlements along the River Murray. He was not one who took the depressing view that because they have brought much land into cultivation they were going to flood the markets of the world with their products. He believed that all that was necessary to solve the problem was proper organisation for putting our products on the markets in a form at which they would be acceptable, and at prices at which they could be absorbed. That was all that was necessary to enable them to dispose of all of the fruit grown in South Australia or, indeed, in the whole of the Commonwealth.

The Minister strongly urged that special efforts should be made by the fruitgrowers to market fruit in case lots in the interior of the State. He held out hope that if the Railway Commissioners were properly approached they would be prepared to make special arrangements to facilitate the distribution of fruit in the interior.

The Minister congratulated the association on its progress. He thought that the recently appointed Fruit Board should be of material benefit.

Discussing the question of dried and dehydrated fruit, the Minister offered assistance from the Government in the establishment of community dehydrators.

Mr. C. T. Fisher (president of the association) presided, and there was a large attendance of members. The reports submitted showed that the membership had increased greatly, and now, exclusive of the vinegrowing section, numbered 739. The financial reports showed a cash balance of £39/6/9. Two new branches had been opened—at Williamstown and Balhannah. Two proposed branches were to be located at Angaston and McLaren Vale. The president reported that steps had been taken to organise the Grape section of the industry. A deputation would wait upon the Railway Commissioners to endeavour to obtain a special rate for shipments of Grapes and Tomatoes to the Melbourne market.

The following motions were carried:—

That a regulation be added to the Pure Foods and Drugs Act, as follows:—That no liquid bearing the name, or similar name of a fruit, shall be sold or offered for sale as fruit juice, unless such contains at least 60 per cent. of pure fruit juice. — (Campbelltown branch.)

That the association approach the Government with a request that the fruit inspectors be given instructions to enforce the Act to the letter with regard to neglected gardens. — (Balhannah branch.)

The Government Horticultural Instructor (Mr. G. Quinn) was present, and addressed the conference.

MURRAY CITRUS GROWERS' ACTIVITIES.

The Murray Citrus Growers' Association is endeavouring to get a standardised Orange pack. Last year the Waikerie branch established a Central Packing Company, which had good results. At the recent association conference it was decided that central packing was desirable, and that branches be asked to take it into further consideration.

Last year the association had sufficient louvre railway vans to carry citrus fruits, and in view of the shortage of crop for the 1923 season it is not expected that there will be any difficulty in this regard. It was resolved that the Adelaide marketing system introduced last season should be continued. The conference expressed regret that the Government had refused the association's request for the appointment of a citricultural expert, and asked that further consideration be given to the application. The following have been appointed members of the central executive:—Messrs. A. E. Ross, president (Waikerie), C. A. L. Morant and C. H. Katekar (Renmark), A. P. Wishart (Berri), C. Plush (Winkie), L. W. A. Peacock (Toorak), E. W. Chaston (Kingston), F. H. Metters (Murray View), J. J. Odgers (Ramco), and J. B. Murdoch (Holder).

ADVISORY FRUIT BOARD.

Advertising Fruit in England.

Dried Fruit Standards.

THE first meeting of the South Australian Advisory Fruit Board was held at the Minister of Agriculture (Hon. G. F. Jenkins), on March 23. There were present the Minister of Agriculture (chairman), and Messrs. W. L. Summers, G. Quinn, C. T. Fisher, J. Donaldson, H. J. Bishop, A. O. Pike, A. E. Ross, T. S. Oldham, J. A. Parkes, H. Wicks, E. E. Chapman, J. B. Randall, and G. A. W. Pope.

The Minister read the constitution of the Australian Fruit Organisation, and stated that he had received from some exporters of dried fruit, who were not members of the Australian Dried Fruits' Association, a request for representation on the board. To enable him to give effect to their request it would be necessary to enlarge the board. He had not reached a decision on the matter.

It was decided that the board should recommend to the Australian Fruit Council that the expenses of members to the council (train fares and travelling allowance of 25/- per day) should be borne by the Commonwealth Government.

The following were nominated and elected as representatives of the board on the council:—Representative of soft fruit, Mr. J. B. Randall; citrus fruit, Mr. J. A. Parkes; dried fruit, Mr. A. E. Ross; canned fruit, Mr. J. Donaldson.

It was resolved to strongly recommend that the manufacturing interests of each State should be added to the council.

A resolution of the council that the matter of the reduction of the State inspection fees be referred to the State Advisory Boards was received, and it was agreed that Mr. Quinn should submit, at the next meeting, a statement of fees charged by each of the States and also total fees received in South Australia and the expenses in connection therewith.

It was also decided to recommend that the proposal of the National Federation of Fruit and Potato Trades' Association of Great Britain—to deduct ½d. per case

from the returns of the sales of Australian fresh fruit in England for the purpose of meeting the expenses of advertising Australian fruit in Great Britain —should be adopted.

The Minister of Agriculture is to be requested to use his influence to secure, with the least possible delay, the adoption of the proposed Commonwealth regulations relating to the export standards of dried fruits.

The meeting also recommended that the State Governments should be asked to introduce uniform legislation to provide standard grades for dried fruit packed for sale within Australia.

Irrigation Commission Appointed.

In The South Australian Executive Council on March 23, the following were appointed members of the Irrigation Commission provided for by the Irrigation Act of last session:—Messrs. E. J. Field (Chairman), R. Horsefield (Engineer), and S. McIntosh (Irrigational Member). The commission was deputed to take up its duties immediately after Easter, when Mr. Field will be engaged in the preliminary work of organizing the department. The commission will take over the whole of the management of the settlements on the Murray, including the soldier settlements.

DEHYDRATION OF FRUIT IN SOUTH AUSTRALIA.

Lyndoch Leads the Way.

(By A. A.)

Lyndoch, a charmingly situated vine and fruitgrowing district in South Australia, has established a dehydration plant on modern lines to deal with the surplus fruit of the district.

The district is noted for the quality of both its fruit and vine products, and produces large quantities of wine, dried Currants, and fresh fruit for the Adelaide markets. Each year a quantity of unmarketable fruit was wasted, and a small company—The Lyndoch Evaporator Ltd.—was formed locally to deal with the fruit which would, under ordinary circumstances, often be unmarketed or wasted.

The Board of Management is composed of fruitgrowers, with Colonel F. H. Francis, D.S.O., O.B.E., as chairman, whilst the manager—another fruitgrower —is Mr. E. C. Filsell. The secretary to the company is Miss Filsell, who is a capable and enthusiastic young lady, with the interests of the company at heart. During this season the plant has been kept at work during the whole time, and the samples of dried fruit put through the dehydrator, viz., Currants, Pears, Lexias, Sultanas, Apples, Prunes, testify to the high quality of product turned out.

During the visit the dehydrator was dealing with Apples, and it is considered

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that the season will finish in about three weeks. The manager (Mr. Filsell) states that though he had not had any previous experience in the work, he found no difficulty in handling the product.

The dehydration plant was erected by Evaporators Construction of Adelaide, and is a substantial building, which permits of the fruit being treated before being placed on the trays. Apples for instance are cored, peeled and dipped before being placed on the trays. The trays are placed on trucks and all fruit requiring to be sulphured is transferred to the sulphur boxes, thence to the dehydrating chamber, the dehydration being accomplished by circulating hot air through the trays by means of fans.

Proper provision is made for a re circulation of portion of the saturated air according to the most up-to-date and approved practice as defined by the latest Californian dehydration experts.

The plant is capable of dealing with *three tons of fresh fruit per 24 hours*, and is considered sufficient for the immediate requirements of the district.

The general lay-out of the plant allows an extension to double the capacity with little extra expense, without interfering in any way with the present buildings.

The quality of the dried fruits was superior to the ordinary sun-dried fruit, and the output has commanded a ready sale.

Only cull Apples were treated, yet the result has been excellent, the quality and appearance being splendid.

It is the intention of the company to dry Potatoes as soon as the balance of the Apples are finished, thus enabling the company to extend its usefulness.

DEHYDRATED PINEAPPLES IN QUEENSLAND.

The dehydration plant of the Beerburrun Co. commenced operations at Nambour on April 4, in the presence of a large gathering. The operations are largely financed by the Queensland Government. Mr. R. W. King, president of the Nambour Fruitgrowers' Association, acted as Government checker in testing weights for the fresh and dehydrated fruit. The dehydrator is the Morton "Efficiency" type.

The Parson: "I intend to pray that you may forgive Casey for throwing that brick at you."

The Patient: "Mebbe yer riv'rence 'ud be saving toime if ye'd just wait till Oi get well, and then pray for Casey."

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The combined insecticide and fumigant that can be used on your trees at any time of the year, and costing less than 3d. per gallon for effective strength.
Destroys Woolly and all Aphis, Red Spider and all Scale Insects, White Louse, White and Pink Wax.
We recommend 1 part Gumlypta to forty parts water for general purposes.
GUMLYPTA ORCHARD SPRAY is Eucalyptus Oil and other insect destroying oils scientifically blended with Carbon Bi-sulphide, etc., so as to mix with water at any strength.
Prevent Fungus growth and Leaf Curl, etc.
Thousands of gallons sold throughout Yanco, Gosford, Wyong, Orange, Richmond (N.S.W.), Mildura, Castlemaine (Vic.), Stanthorpe, Mapleton (Q.), and the Huon (Tasmania).

PRICES:—7/9 per gallon in 4 gallon tins, 8/6 in 1 gallon tins, F.O.B. Sydney

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Queensland.

Citrus and Cultural Notes.

Tropical Propagating Nursery Advocated.

(By our correspondent)

GENEROUS rains were fairly well distributed over the Southern Coastal areas, and, though belated, were very welcome after the prolonged dry spell. Upon the crops now maturing, **Custard Apple** and **Citrus**, except with the late varieties of the latter, the benefits will not be pronounced.

Top prices have been realised locally for the former, and, with a slight decline, export to N.S.W. ensures a good rate through the season. Like several other fruits of a soft nature, the Custard Apple, unless immediately used, when quite ripe rapidly deteriorates, also the flavour of the fruit does not mature if picked too green.

These features, under present conditions, are considered a barrier against satisfactory export beyond N.S.W., but as production increases means will no doubt be devised for placing this luscious fruit on Melbourne and Adelaide markets.

Early Oranges have been on the market in fair quantity, but most on the immature side and deficient in quality. Exports to southern States have realised fair returns. The crop on the whole is rather backward this season.

In some districts the fruit fly has been most persistent in its attentions and unfortunately the citrus grower has not experienced the appreciation which prompted the growers of temperate fruits to invoke the compulsory cleaning of orchards, and gathering and destruction of infected fruit throughout their districts, and, as a further provision against the introduction of the pest in fruit, a regulation has been issued forbidding the introduction of fruit subject to the fly, (a detailed list being published) into the Stanthorpe district, unless such fruit has been previously in cold storage at a temperature of 35 degrees for 21 days, this temperature having been proved fatal to the larvae of the fly.

Strawberry Planting has, owing to the absence of summer rains, been held in abeyance and in some districts the supply of runners, from the same cause, has been nil.

Citrus planting season extends from May to September. In the warm districts early planting is advisable as it admits of roothold being obtained before Spring growth, but where frost injury is liable late planting is recommended.

Citrus planters are prone to include

too many varieties,

the result, as evidenced in very many established orchards, being an undue percentage of unprofitable trees. A limited range of varieties gives satisfaction in all areas, but many, including Navels and Glen Retreat and Ellendale Mandarins are a rank failure in many parts. Joppa, Sabina and Valencia orange and Scarlet (of various types) mandarins can be relied upon throughout the State; a much wider range is adaptable to different districts or localities.

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The High Standing and Long Experience of this Firm is a Guarantee that the Best Interests of Consignors will be conserved.

Amongst more recent varieties Kiang mandarin and Byfield seedless orange are the most promising. The latter gives indication of being the most profitable and popular variety in the State. Enthusiasts claim the fruit to be

equal to the best navel

and without endorsing this claim it is recognised that any deficiency which may exist is more than compensated for in the increased vigour of the tree and its abundant productiveness.

Lemons have been far too extensively included in coast lands where there is no prospect of their producing fruit of reasonable quality, and where the life of the tree is very limited, in fact a healthy and productive tree over 12 years planted is a novelty. Except in the drier areas lemons are, on the whole, an unprofitable crop.

Towards the end of month deciduous trees (of early varieties) will be in fit condition for transplanting. Their inclusion (with the exception of a few varieties of American Plums) on the coast is mainly a gamble with the fruit fly in which the enemy has in 5 seasons out of 6 the best of the argument.

In isolated places in Central and North Queensland a few **Date Palms** have borne fair crops of good dates. To give the date a fair trial the Department of Agriculture introduced about 50 suckers (seedlings are unreliable), for planting at Home Hill State Farm (tropical,) where the conditions are favourable except that the rainfall is rather in excess of requirements. Still with a suitable soil, an abundance of water at a shallow depth, and, for the tropics, a very light rainfall, the prospects are encouraging.

It is unfortunate that Home Hill was not availed of for the establishment of a nursery for purely tropical fruits instead of selecting a wretched sandbank in Moreton Bay. Incidentally Home Hill is not associated with the Fruit branch of the Department of Agriculture.

The present is an opportune time for working up land, manuring, and putting under crop for manure where intended to plant with pineapples.

The **maintenance** of humus in the soil is indispensable to the successful cultivation of pines, and more attention to this detail would minimise, if not eliminate, much of the difficulty experienced amongst the plants, and which in old lands is almost general.

CORRECTION.

Propagation of Tropical Fruits in Temperate Climate not Logical.

A obvious error occurred on page 139 of our April issue, re propagation of tropical fruits.—The paragraph reads: "logically extensive propagation of purely tropical fruits in a semi-tropical, or tropical climate does not commend itself from any aspect, including financial."

Tropical should have been printed **temperate** as it is only under tropical conditions that reasonable results are obtained.

"Conditioning" Citrus Fruits.

Lemon Curing Revolutionised.

Successful Tests in U.S.A.

IN our last issue the "conditioning" of Citrus fruits was mentioned and it seems likely that as a result of experimental work carried out in America, the process will be very much simplified and the cost reduced to a minimum. If we in Australia are to keep abreast of the times and maintain our markets, we must eventually undertake similar work.

The following is a report from the March issue of the "Californian Citrograph":—

* * *

The discovery that Ethylene gas, which can be bought in cylinders at comparatively small expense, will color Lemons and Oranges, may revolutionize the entire curing process of citrus fruits. It is yet too early to definitely make such a declaration but the experiments which have been made by Mr. F. E. Denny, acting with E. M. Chase of the U.S. department of agriculture laboratory in Los Angeles, indicate such a result.

If the process proves to be all that is now expected of it, it will be impossible to do away with the sometimes hazardous method of

curing the Lemons

by the use of fumes from small kerosene heaters. And still further, if the success of the method of curing Lemons under tents is later demonstrated in a larger way, it may be possible to do away with some of the curing rooms into which the fruit is now placed, to bring the color up to proper point.

The announcement that it had been found that the inexpensive Ethylene gas in very small quantities will cure Lemons, was made at the February meeting of the Lemon Men's club in Los Angeles.

While work had been done on this coloring process since 1913 it was but a few months ago that the Lemon Men's club made arrangements to conduct a series of experiments in the packing house of the Whittier Citrus association at Whittier, U.S.A., with Mr. Denny in charge. The announcement that the problem had apparently been solved was a great surprise to the Lemon growers and was greeted with approbation by Secretary Powell of the club, and the assembled members.

Mr. Denny was most conservative in his statements, as is customary with the scientific investigator, and he wants to carry on further experiments with growers and to co-operate with them in making effective tests. The gas element which caused the color to come up on the Lemon has been a mystery, but that has now been effectively solved.

The best of all was the fact that the Ethylene gas is comparatively inexpensive. The price in U.S.A. is 1d. per cubic foot. The coloring can be done in approximately six days and the dosage can be cut to as low as one cubic foot applied twice a day to cure a half car of Lemons. It is safe to use, is not inflammable unless a match is touched to the pure product as it comes from the cylinder. Mr. Denny stated that he had breathed Ethylene much of the time for the past few months and thus far had not experienced even a headache from it

The gas is the same weight as nitrogen and will diffuse itself evenly through the air. The cost of coloring a carload (600 cases) of Lemons with this gas, Mr. Denny stated, should not exceed 4/-, and he expressed the opinion that that could be reduced at least one-half.

The temperature at which the Ethylene works best is from 65 to 70 degrees Fahrenheit. The speaker told of the excellent results which had been obtained by the use of Ethylene in **curing fruit under an ordinary fumigation tent.** The ventilation obtainable seems to be most desirable. It did not work as well under gas tight tents, the speaker asserted.

Further work will have to be done Mr. Denny stated, before it could be positively stated that the use of the tent was best, but he asked the co-operation of the growers in carrying on further experiments. He advised them that the report he made was merely a preliminary one and that it would require further work to determine things which are not yet fully understood.

Fumigating Citrus Trees.

Liquid Hydrocyanic Acid Gas.

South Africa's New Method.

FUMIGATION with hydrocyanic acid gas has proved the most successful treatment for scale and other pests, especially in citrus trees, which, being evergreen, present serious difficulties in the matter of effective spraying. In California particularly the process has been thoroughly studied, but there have remained serious drawbacks which have checked the general adoption of the treatment, states the Adelaide *Advertiser*. It has, however, maintained its pride of place as the most efficient, and in the end the cheapest, method of controlling scale insects, as its killing power is effective, for the reason that every part of the tree, with its attendant pests, is exposed to the gas.

The usual method of generating the gas is by action of sulphuric acid on sodium or potassium cyanide, whereby the hydrocyanic acid is liberated as a colourless gas, with a peculiar characteristic smell.

No one who has ever taken part in the work of fumigation will forget the precautions that are absolutely necessary in the process. The covering of the trees with the canvas sheets or tents, the measuring of the cubical contents of the enclosed space, the weighing of the cyanide and measuring of the sulphuric acid, the sudden rise in temperature when the acid is diluted with water, and the risk that when the cyanide is dropped into this hot liquid it will splash out on the canvas—all call for an extreme care. A sigh of relief usually goes up when the fumigation work of the season has been completed.

It is also stated that commercial sulphuric acid usually contains traces of nitrous fumes, and these are driven off during the reaction between the cyanide

and acid. The effect is not immediately apparent, but when the tents are brought out for use the following season the action of the nitrous fumes is seen. The canvas is often so badly damaged that it can be torn like paper.

A still more serious drawback is the fact that when trees are fumigated in sunlight or exposed to sunlight soon after fumigation by the cyanide and acid method extensive injury often ensues. The stronger the dose the more evident the injury. This is due, it is claimed, not to the hydrocyanic acid, but to the sulphuric acid and impurities contained therein. *To avoid this it is quite common to carry out fumigation at night.*

It was to avoid these and other drawbacks that Mr. C. W. Mally, senior entomologist to the Department of Agriculture of South Africa, conceived the idea of

liquefying the gas

and vapourising it as required. In 1915 he prepared a small quantity of liquid hydrocyanic acid, and found that, contrary to generally accepted ideas, it was very easy to control and handle, whilst its killing power was equal, if not superior to, the gas as generated from cyanide and acid.

Months of research work were found to be necessary before a

practical commercial process

of manufacture was discovered, but it is now claimed that the initial difficulties have been surmounted, and South Africa is being supplied with the liquid hydrocyanic acid in glass ampoules of various sizes for different sized trees. This avoids the tedious measuring and weighing, as the ampoule has simply to be broken under the tent.

The difficulty of transporting such a volatile poison has been got over by packing in tins with sufficient lime mixture to effectively "kill" the liquid in the event of premature fracture of one or more bulbs. The tin is then sealed and packed in an outer wooden container.

Obviously the new treatment is more expensive in some directions than the older method, but as it

does not damage the tents,

which are considered in the Transvaal to be the main items of expenditure in fumigation work, a comprehensive experiment in Australia is well justified to compare the relative advantages and disadvantages of the two methods.

Citrus culture has been so widely extended in Australia within recent years that any process which will facilitate the never-ceasing war against pests is deserving of the closest investigation.

Mike was working diligently on his farm when he saw the postman coming up the road, bearing for him a black-edged envelope.

Mike became uneasy, and showed it.

"Hope it's not bad news," said the postman.

"It is that," said Mike, glancing at the address. "It's upset I am intoirely. My brother Pat's dead. I can tell by his handwriting!"

Citrus By-Products

Proposed New Manufacturing Company.

Murray Citrus Growers Enthusiastic.

A MATTER of considerable interest is now before the citrus growers of South Australia. At a recent gathering of growers at Renmark (S. Aust.), Signor Renzo de Pasquale, an Italian expert in the manufacture of essential oils and other by-products from citrus fruits also attended. The secretary of the South Australian Citrus Organisation (Mr. J. A. Parkes), states the *Murray Pioneer*, submitted a report, of which the following is a summary:—

For some years the growing of Lemons has proved unremunerative. During last season it was difficult to secure even 1/- a case, and hundreds of cases rotted on the ground.

The grower of Oranges is also passing through a period of stress, and as it is essential that only a first grade article should be exported, a large amount of culling has to be done. These culls usually realise low prices; oversize fruit also fails to bring payable prices.

An opportunity is now presented to citrus growers to overcome these disabilities. Mr. Scammell, of Messrs. Faulding & Co., has introduced an Italian gentleman, S. Renzo de Pasquale, who has been associated with an old established firm of the same name in Italy whose business has for many years been the extraction of essential oils and juices from Lemons. Mr. Pasquale has stated that in Messina, families are making a living on the product of one acre of Lemons.

Mr. Pasquale (who is at present engaged by Messrs. Faulding & Co.), has produced samples of oil and concentrated juices of Lemons and Oranges. At Gosford (N.S.W.) a company is now carrying on this business. It should be stated that only owing to the new excise regulations is the profitable manufacture of these oils made possible, and according to the agents for the Gosford Co., there is a saving of 9/6 a gallon in favour of Australian oil of Lemon. Costs of production are much heavier in Australia than Italy, therefore the success of proposed industry would largely depend upon the retention of the existing duty.

The following are the products which can be obtained from Lemon fruits.—From the peel: Essential oil, dried Lemon peel, Lemon peel in brine, and candied peel. From the pulp: Concentrated Lemon juice, condensed Lemon juice, citrate of lime, and pressed pulp as food for cattle.

Orange fruits. The products obtainable from the Lemon are also obtainable from other fruits of the citrus tribe. Mr. Scammell has informed your representatives that there is practically an unlimited demand for the products throughout Australia and the East. Quantities obtainable from 10,000 Lemons or approximately 1 ton of fruit are: 10 lbs. (and more) of essential oil, 100 gallons of crude juice, 500 lbs. of dried peels, 500 lbs. of food for cattle. From 100 gallons of crude juice the following are obtained:—33 gallons of triple strength juice, or 10 to 12 gallons condensed juice, or citrate of lime in proportion with the content of citric acid in the crude juice 5-6 per cent.

Estimated Costs.

Mr. Pasquale, in submitting the following particulars, has indicated that liberal allowance has been made for contingencies. Growers will realise that the price quoted as payment for Lemons to be treated is exceptionally high in comparison with prices realised for fruit to-day.

Costs to buy and treat:—

10,000 Lemons delivered at factory	£25
Working expenses by hand	15
General expenses and redemption of capital	5
	£45

Products recoverable and value of same:—

10 lbs. oil at 35/-	£17	10	0
33 galls. concentrated juice, at 30/-	49	10	0
500 lbs. cattle food, at 2d.	4	3	4
500 lbs. dried peel, at 6d.	12	10	0
	£83	13	4

Machinery required:—

4 cylinders, at £20	£80
1 copper still	85
Separator, vessels and other parts	350
1 agitator	10
2 presses	40
1 steam boiler	50
1 electric engine	25
1 vacuum pump	40
1 enamelled still	200
	£880

The whole of the plant, with the exception of the enamelled still, can be manufactured in Australia. With this machinery three men and three boys could treat 100 or more cases per day.

Should it be decided to form a company for the purpose of handling citrus fruits as described, the plant mentioned would be inadequate for river requirements, and more money would be required at the outset. Your executive recommends that members of the association contribute a portion of the capital on the basis of say £1 an acre for each acre of citrus held. The approximate acreage held by members is 1,240.

It is anticipated the Government would make an advance under the Loans to Producers Act. An expenditure of about £3,000 should provide suitable premises (rented) and supply machinery necessary to give the proposal a fair trial. If the scheme is a success, there should be no difficulty in obtaining further capital.

Further information is being obtained as to the outlet for the by-products, and the Government will be approached re financial assistance.

The machinery required for the treatment of citrus fruits can also be used for the production of concentrated Grape

juice, Onion and Tomato juice, etc., all of which are marketable in Australia and abroad. Some of the products, viz., citrate of lime, and concentrated juice, are marketable even in London, because they keep so well for an indefinite period, and their cost of production will not be dearer than that of other competitors, except in the matter of freight.

Commenting on the paragraph in the report covering excise regulations, Mr. Pasquale states that although the cost of production in Australia is heavier than in Italy, it is possible to compete with that country if the industry is conducted on sound economical lines, and by utilising all the raw material.

As the industry grows, it may be found necessary to ask the Commonwealth Government to protect it by a higher duty on all similar products imported from foreign countries.

Mr. Parkes added that in Victoria last season many tons of Lemons had rotted on the ground owing to the inability of growers to market the fruit. Personally he was inclined to be a little dubious of markets being found for the by-products, but Mr. Scammel, who was naturally well acquainted with marketing conditions, had every faith in the undertaking, and was satisfied that no difficulties would be encountered in that direction, The operation of extracting by-products from the fruit demanded great scientific skill and experience. Providing that the services of Mr. Pasquale were retained, Mr. Scammell was prepared to put capital into the venture.

Mr. A. E. Ross, president of the Citrus Association, said he was very enthusiastic about the proposal, but nothing would be lost by making a thorough investigation before deciding. The firm to which Mr. Pasquale had belonged had a world-wide reputation, and the industry in Sicily was so extensive that half the population of four millions was engaged in it. The whole thing hinged on the question of markets, and when they were certain that these could be found he saw nothing to prevent them going on with the scheme.

The chairman (Mr. C. Morant) stated that Mr. Scammell had told him that in Mr. Pasquale they had an expert who possessed a thorough knowledge of the extraction process, and it would be throwing away the chance of a lifetime if his services were not availed of. Without using preservatives he was able to prepare oils and juices which kept for long periods without deterioration. Essence of Orange sold just as readily as essence of Lemon, and if the industry were developed it would enable growers to dispose of their cull and oversized fruit. If markets could be found for the prepared products tremendous returns would result. If Mr. Pasquale's estimate of profit were reduced by 50 per cent., there would still remain a handsome margin of profit.

Mr. F. W. Harris said he thought that Mr. Ross had struck rather a note of depression regarding the proposal. He believed there would be no difficulty in selling the products at a satisfactory figure. In estimating costs, Mr. Pasquale had put the price of Lemons at £25 a ton, but latterly growers who received about half that sum thought they had done well.

Mr. H. G. Evans said the proposal looked as though it would go far towards solving their market difficulties. He moved:—

"That, provided the central executive is satisfied that the business would be a commercial success, it is recommended that growers subscribe the necessary capital on the basis of 20/- to the acre for the establishment of the scheme."

Mr. H. S. Pike, in seconding, said the proposal was well worth demonstrating; he would willingly subscribe his quota.

Mr. Ross said that one of the first things necessary would be to approach the Government and urge them to prohibit the sale of fruit juices that contained preservatives.

Dr. Aspinall said that it had been proved that Orange juice contained a greater proportion of vitamines than anything else, except cod liver oil. If the Orange juice could retain its properties for two years without preservatives being added to it, it would find a very extensive sale at profitable prices. He supported the motion.

Mr. H. D. Howie said it was important that every encouragement should be given the establishment of secondary industries. He did not think growers would hesitate to put up the necessary capital.

The resolution was unanimously carried.

CITRUS BY-PRODUCTS

Imports into United Kingdom

The imports of candied or drained peel into the United Kingdom in 1919 were 7,938 cwts. of 112 lbs. each.

This is packed in 7 lbs. boxes the approximate values are: Candied orange peel 90/- per 112 lbs. Candied lemon peel 84/- per 112 lbs. Cost and freight London.

For the season 1921-1922 the quantities of peel in brine are said to be as follows:

Oranges, 2,100 tons. Lemons, 3,600 tons.

Packed in casks of 756 lbs. It originates mainly from Sicily and is shipped from February to May.

The approximate values are:

LEMON IN BRINE.

Large skins (5 oz. per whole fruit) 7/6 cwt. C. & F. London.

Ordinary skins 6/9 cwt. C. &. F. London.

Broken skins 5/6 cwt. C. & F. London.

BITTER ORANGE IN BRINE

Bitter orange skins in brine, 11/- cwt. C. &. F.

Broken skins in brine, 7/6 cwt. C. & F.

Both Orange and Lemon are also packed in "pipes" (7 cwt.) Skins in this case contain pulp.

SOUTH AFRICA CITRUS EXPORTS TO GREAT BRITAIN.

331,701 Cases in 1922.

Production Rapidly Increasing

During the year 1922, South Africa shipped 331,701 cases of citrus fruits to the United Kingdom, made up as follows—Oranges 219,559 cases, Grapefruit 7,408 cases, Naarjes (a type of Mandarin) 10,937 cases, and Lemons 85 cases.

The fruit was of better quality, and there was far less waste than previously, owing to the efforts of the Division of Horticulture and the newly formed Citrus Exchange.

It is stated by Mr. R. E. Nebelung, Citrus Specialist, Union of South Africa, that the expected Orange production for 1930 is between six and seven million boxes.

COMPARATIVE STATEMENT OF DECIDUOUS FRUIT SHIPMENTS FROM CAPE TOWN. SEASON 1922-23.

Steamers Sailed	Destination	Peaches	Pears	Plums	Nectarines	Apricots	Grapes	Apples	Sundries	Total Boxes
24/11/22	Southampton					10			Cherries 162	172
1/12/22	Southampton	42		115		1,001				1,158
8/12/22	Southampton	911		1,195		1,611				3,717
15/12/22	Southampton	5,420		2,541		2,622				10,583
22/12/22	Southampton	20,772		3,670		3,403				27,845
29/12/22	Southampton	12,181	55	5,456	304	537	17			18,550
5/ 1/23	Southampton	5,296	4,963	6,954	4,506	135	310			22,164
12/ 1/23	Southampton	7,617	12,835	7,508	3,354	109	1,256	300		32,979
19/ 1/23	Southampton	13,026	39,954	11,863	5,057	168	2,707	1	Mangoes 212	72,988
26/ 1/23	Southampton	11,648	43,568	9,208	4,974	11	3,938		Mangoes 120	73,467

263,623 Boxes=Approx. 3,005 tons since opening of Season, to end of January, 1923.
Later figures will be published, as same come to hand from *South African Fruitgrower.*

THE MOST VALUABLE

HORTICULTURAL BOOK OF THE YEAR.

ONE HUNDRED AND THIRTY PAGES of bright information.

A comprehensive review of the Australian and New Zealand Fruit Industries.

The fruit Industry in every Australian State and New Zealand described and illustrated.

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NEW SOUTH WALES

District Notes.

Murrumbidgee Irrigation Areas.

(By Our Special Correspondent.)

Delegate visits America.—Mr. J. S. Vagg, of the Griffith Producers Co-Operative Co. Ltd., who has spent the last four months in America, is returning to the Areas shortly. In his correspondence, Mr. Vagg states that the information he has obtained at first hand, with regard to orange handling for export, the processing of lemons, and the correct methods for drying fruits, is such as would have taken the M.I.A. growers many years to learn by experiment. Mr. Vagg has purchased for the use of Citrus growers of Griffith a Stebler-Parker grader, and other machinery for use in the packing shed. He also has with him a number of plans which will be useful and valuable when the Griffith growers extend their present buildings.

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Solicit consignments of Australian Fruits
Tasmanian Representative:
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PRINCES WHARF, HOBART
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Citrus Packing Sheds.

Second-hand Cases.—A campaign is now being conducted by the growers of Leeton and Griffith to get the regulation relating to packing cases rescinded. As the regulation stands at present, no secondhand cases may be brought on to the Areas, and consequently the growers have to use new cases in every consignment. As an instance of the hardship and loss which this regulation entails, it may be pointed out that last Citrus season, every case of Oranges which left the Areas cost the grower 1/3, which amount was completely lost since the case could not be returned. The Citrus growers of Gosford, on the other hand, at the end of the season, calculated that the net loss to them for each case was 2½d. only, owing to the fact that the same cases were returned and used time and time again.

While the growers of the M.I.A. realise that the regulation is enforced in their own protection, so that the danger of introduced pests and diseases may be reduced to a minimum, yet it is felt that a sterilizing plant, under the supervision of a Commission authority, would be quite as effective, and by its use a saving of perhaps 1/- a case to the grower might be effected by the use of returned cases.

Prolific Grape Crops.—The grape crops of nearly every variety are remarkably good this season throughout the Areas. At the present time Cornichons are being picked and packed for the Home Market. Large consignments of Ohanez (Doria) have left the Areas for the English market, and a quantity is to be placed in cool store, to be released as occasion demands.

It is understood that the factory of Messrs. McWilliams and Sons, at Yenda, now in process of completion, will ultimately be capable of handling 2,000 tons of Wine Grapes, equalling 300,000 gallons of wine. Messrs. McWilliams compute that their two factories, at Griffith and Yenda, have this season handled about 700 tons of fruit.

Valuable New Peach.—Mr. C. Braithwaite, in charge of the Irrigation Commission's Nursery at Leeton, has found a new seedling peach, which promises to be a most successful variety. The fruit is, in appearance something of the type and colour of the Golden Queen and Phillips Cling, it is distinctly an improvement over the Pullar Cling, which is at present the most largly planted clingstone canning variety, and it ripens a trifle later.

Orchard development condemned.—At meetings held in Griffith and Yenda, under the auspices of the Mirrool Settler's Association, unanimous resolutions were passed condemning the Government's declared policy of extending the development of the M.I.A. in the direction of fruit orchards. It is generally admitted that development is essential and valuable in other directions, but it is contended that in the present condition of the fruit industry throughout Australia, any extension in this way at the present juncture can only mean ruin to the growers already established, and to those who may be persuaded through ignorance of conditions, to develop new orchards until such time as definite markets have been found for the present and anticipated crops from the existing plantings.

SOMERSBY PACKING SHED.

The citrus growers of Somersby, one of the mountain districts of Gosford, N.S.W., will this year be in the packing-shed movement. They have decided to form a co-operative limited liability company and to erect a packing house.

This decision was reached at a well-attended meeting of intending shareholders, when the chairman (Mr. H. S. Robinson) announced that the full number of shares had been applied for, and that the company was in a position to go to allotment.

Great keenness is being shown locally in the movement, and it is understood that the company, when formed, will become a member of the Citrus Growers' Association.

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We are the largest receivers of Green Fruit from Australia, our consignments having steadily increased annually since our business was established in London in 1902. Our Managing Director has had the handling of consignments to the markets of Great Britain and Europe since 1900, and personally supervises the sale of all fruit consigned to the Company. Fruit is placed for sale in whatever markets or way (auction or private) appear most suitable, thus getting it before all classes of buyers; our increasing consignments demonstrate the success of this practice.
F. W. J. MOORE, Managing Director
Telegrams: Tirralirra London
Bankers: Bank of New South Wales

The executive includes Messrs. H. S. Robinson (chairman), Ray Moore, G. C. Linton, A. Grant, S. Henson, B. Reddall, and J. Scholer, with Mr. M. E. Lyne hon. secretary. It is expected that the shed will be in operation at an early date. The new shed will probably handle between 15,000 and 20,000 cases of the leading varieties this season.

A PROLIFIC FRUIT CROP.

Batlow.

The fruit crop in Batlow this season was a most prolific one. The trees were so heavily laden that the limbs were bearing down with the weight of the fruit, and in some cases touched the ground. Several record crops have been carried by individual trees in various orchards. In Mr. A. J. Arnot's "Nindethana," 27 cases were picked off one Winter Cole Pear tree, 13 to 14 years old, while an eight-year-old tree in Mr. Case's orchard carried 13 cases of Winter Cole Pears. Messrs. Butz Bros.' Winter Coles averaged 13 to 15 cases. In the latter orchard 25 Granny Smith Apple trees produced 300 cases, one 12-year-old tree carrying 18, and the Jonathan Apples in the same orchard averaged 5 to 6 cases. "Nindethana" Jonathans averaged 7 cases to a tree, 400 trees. One extra heavy one bore 11 cases.

The quantity of fruit forwarded in February totalled 11,066 cases, or over 247 tons. Of this 2,826 cases were exported, most of the remainder going to the Sydney market.

The total quantity of fruit exported from Batlow to England this season amounted to 15,640 cases of Apples, mostly Five Crowns and Jonathans, and 170 trays of Pears. A larger shipment of Pears was to have been sent, but owing to the steamer "Somerset" being withdrawn from this trade, and similar conditions being unobtainable on the other boats, only a small trial shipment of Pears was made, four growers participating.

It has decided to forward a co-operative packing shed.

SYDNEY ROYAL SHOW.

The annual show of the Royal Agricultural Society of N.S.W., which was held from March 26 to April 4, as is usual, attracted very large crowds, who displayed much interest in the exhibits. The display of fruit is claimed to be the best and most representative ever put up by growers. It was generally admitted by experts and growers that the quality and grading of the fruit has never been better nor the competition keener.

Mr. W. H. Everard, M.L.A., who attended the Sydney show, stated that he was particularly impressed with the magnificent displays of fruit in the district exhibits, which took the form of five pyramids. For the second year in succession the Penrose and Kareela districts secured the blue ribbon of the show. The points awarded were as follows:—Penrose Kareela, 81 points; Stanhope, 76; Goulburn, 72. Uniformity of quality, and size were features of the exhibits.

The prizes given in all classes were on the lavish scale, and the fruit in the packed case and dish classes compared more than favourably with previous shows. The varieties packed were mainly the leading export varieties, such as Jonathan, Rome Beauty, Cleos., Dunn's, Londons, Granny Smith. Mr. Everard was particularly impressed with the exhibits of the Granny Smith Apple.

Another matter which struck Mr. Everard was the large attendance of city people; it appeared to him that the Sydney show attracted more city people than country.

The exhibits of table Grapes and Passion Fruit were very fine, the dried fruit displays were also very creditable.

The following were the prize winners in the Apple section:—Messrs. B. Mills, F. G. Stone, W. H. Watson, W. H. Jones & Sons, A. H. Morris, R. Clout, R. Kettle, W. S. Cripps, L. Thompson, Davenport Bros.

"Why do you associate so much with that old hen next door?"

"Well," snapped his wife, "that old hen helped me lay the carpet."

WIRE STRAPPING FRUIT FOR EXPORT

Citrus-growers will be particularly interested in the comments received from London regarding last season's shipments of South Australian Oranges, strapped with Gerrard wireseal strapping. The report states that the fruit in cases bound by this method arrived in better condition than any seen previously, with absolutely no pilferage or breakage.

The shipment was very highly spoken of, and buyers expressed a desire to see all future shipments wire-strapped.

The English railways realize the value of wire strapping, and accept no responsibility for breakage or pillage, unless cases are so treated.

It has been pointed out previously in these pages that the New Zealand Government have made it compulsory to strap cases. Australian growers and exporters would be well repaid the small outlay of 1d. per case, and should give this matter the closest consideration both for export and domestic shipments.

An illustration of the Gerrard wire tying machine showing Orange box strapped is published on page XIV. of this edition.

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ASSOCIATION MEETING—FRUIT SHOW.

BRIDGETOWN FRUIT-GROWERS' ASSOCIATION.

The monthly meeting of the Association was held on March 16th. Rev. F. Davis, President, presided.

Railway Matters.

In dealing with the report of the recent conference with the Railway Commissioner, states the "Blackwood Times," it was noted that where growers paid freight on 21 cwt. before, the same number of cases went through now at 20 cwt.

The Chairman stated it was optional for growers to weigh their fruit or let it be carried at the average of 56lbs. per dump case. The previous season, when the average weight was placed at 60lbs. per case the Mount Barker growers objected, and insisted on weighing their fruit, thus saving about £400.

To weigh the cases at Bridgetown during export rushes was impossible and the department had realised this.

A vote of thanks was carried to Mr. J. H. Smith, M.L.A., for arranging the Conference with the Commissioners.

Mr. E. Hill stated that over 3,000 tons of fruit had left Bridgetown during the previous month.

Australian Fruitgrowers' Conference

Decided to ask that the Officer in Charge of Fruit Industries (Mr. Wickens) be allowed to represent growers.

State Fruit Advisory Board.

Mr. O. Sparks gave an interesting account of the experience of the recently formed State Fruit Advisory Board and the trouble they had encountered in an attempt to get an advance from the Government. The Department he stated, had even asked for a joint and several guarantee from members of the Board for the amount to be advanced. Needless to say they refused to do this. He had interviewed Sir James Mitchell and had, after considerable argument, received a guarantee that the loan required would be forthcoming.

Export Shed at Bunbury.

The President stated that during the visit of the Commissioner for Railways they had been promised that shed accommodation would be available in Bunbury for the export fruit going through there this year.

BRIDGETOWN FRUIT SHOW.

Highly Successful Event.

The Annual Show of the Bridgetown Agricultural Society was held at Bridgetown, on March 28, under the presidency, of Mr. J. R. Walter.

In declaring the Show open, Mr. J. R. Smith M.L.A. referred to Sir James Mitchell's big developmental scheme in the South-West of Western Australia.

Factories would have to be built to help the producers, and the time was fast approaching when they would become a large exporting country.

There was an excellent display of Apples, Pears, Peaches, Grapes, and other fruits, as well as vegetables, flowers and produce.

Practically one end of the building was taken up in a magnificant dispay of Apples. Miss B. E. Warburton carried off the five guinea prize for Apples packed for export, second and third place going to Messrs. E. Prosser and J. D. Walter. A two guinea prize for Pears packed for export fell to W. Toyer, while the three guinea prize for Apples packed for the local market was won by Mr. R. May from quite a number of contestants. Mr. F. H. Pearce established a record by winning the three classes for Jonathan, with prizes to the value of &7/7/0; he was faced with keen competition for in the 2¾ class there were 28 exhibits; in the 2½ class 29 exhibits and in the 2¼ class 21 exhibits.

All the competitors deserve hearty congratulation on their exhibits.

The outside ring events caused considerable interest.

W.A. Fruit "Drive."

An excellent exhibit of Apples was recently displayed in the windows of a large shop in the City, same being part of the propaganda for a "big fruit drive," when bushel cases of Apples (40 lb.) were to be sold for 7/-.

THE STARLING PROBLEM.

The most promising method of dealing with the starling is to observe the place where the birds rest at night and feed in the early morning. The settlers in a district should then co-operate to lay good feed for a week or more until the birds have become accustomed to the spot and are coming regularly for the food. Poisoned feed should then be spread. It will be found that enormous numbers can be killed in this way.

The method is better than the gun, of which the birds soon become very wary.—(W. W. Froggatt, Government Entomologist in N.S.W. Agricultural Journal).

NOTICE TO ADVERTISERS.

Advertisers wishing to make alterations in their advertisements will greatly oblige the management by forwarding copy by the 17th of the month prior to month of publication.

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CYGNET

Gardening Notes

Now is a favourable time for planting shrubs (other than deciduous shrubs, which should be planted in the winter). It greatly adds to the beauty and value of a homestead to have pretty flowering and foliage shrubs growing.

What is better, both for shade and beauty, than our own native Wattles or Flowering Gums?

Wattles can be obtained in varieties to keep up a succession of bloom throughout the entire year, whilst the foliage effects, even when the trees are not in bloom, are very fine.

Readers desiring a list of these varieties can obtain same by writing to the Horticultural Editor, "Fruit World."

Wattle trees, too, can be planted for commercial purposes on any waste or poor lands. There is a shortage of Wattle bark for tanning purposes. The varieties most favoured for this purpose are Acacia decurrens, and A. pycnantha. Plantings would need to be continuous to keep up a supply of bark, as the trees are usually stripped of bark when six years old, when the tree, of course, dies.

If any readers are particularly interested, further information is available by writing to the Editor. We understand that, to develop the Australian Wattle bark industry, seeds were recently being distributed gratis by the Master Tanners' Association.

There are many choice varieties of flowering Gums available. All colours are obtainable—crimson, red, pink, white and yellow.

In conifers there is a wide selection of handsome trees for homestead planting. These graceful trees are available in wide variety. It would pay any and every fruitgrower and farmer handsomely to visit the Botanic Gardens when on a visit to the capital city of any State. The trees are there seen growing under natural conditions: the labels are attached and any man with an ounce of imagination could mentally picture such trees growing on his own lands.

Where plenty of room is available Cedars are handsome and effective. Others prefer Cypress, green or golden. The Araucaria Excelsa—the Norfolk Island pine—makes a splendid tree.

At various orchard homesteads we have noticed such shrubs as Oleanders (in variety), Jacaranda (blue flowers, deciduous), Guava (purple berries, edible), Virgelia, Pittosporums, Berberis, Currajong; also Palms, etc.

So many choice shrubs are available that if quoting a list of names it would be a long one. Readers can always obtain information by asking specific questions. One thing is necessary before planting shrubs, and that is, to ascertain its normal height when full grown; if this point is overlooked the plantings may be found, in a few years, to be ill-balanced.

Vegetables.

Supplies of fresh, "own-grown" vegetables are always welcome. Dig the ground deeply and add manure at the bottom of the trench.

Sow and plant now Broad Beans, Turnips (White and Swede), Onions, Lettuce, Cabbage, Cauliflower, Carrot, Parsnip, Radish.

Keep the ground well worked between rows of growing vegetables.

The Flower Garden.

Sow seeds of grass for lawns. (Buffalo is now going off, and should not be planted till the spring.) Seeds and plants of winter and spring flowering annuals can be set out. Stocks, Mignonette, Pansies, Verbenas, Aquilegia (Columbine or Granny's Nightcap).

Flowers are easily grown and readily respond to any ordinary care bestowed upon them. They brighten the home, and are especially cheering to the womenfolk.

An American, who rather prides himself upon his powers of exaggeration in speech, strolled into a fruit shop in Sydney and carelessly picked up a Watermelon.

"Is this the largest cooking Apple you have?" he asked. But before the question was quite asked, the owner of the shop snapped:

"Don't 'andle the Grapes, mister."

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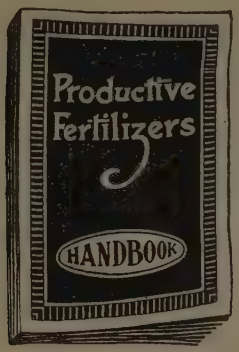

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South Australia and Western Australia: South Australian Gas Co., Waymouth Street, Adelaide.

Victoria.

District News and Notes

VICTORIAN FRUITGROWERS' CENTRAL ASSOCIATION.

The monthly meeting of the Executive of the Victorian Fruitgrowers' Central Association was held on April 18th, at Melbourne.

Present: Col. W. E. James, president (in the chair), Messrs. Bailey, Lang, Mair, Henderson, Tully, Thiele, Aird, Grant, Foster, Hatfield, Wragg (treasurer), Meeking (Dept. of Agriculture), and McNab (Ardmona).

Apology received from Mr. W. C. E. Jones.

Airless Storage.—Secretary reported that he had attended on the "Victoria" at the invitation of the Airless Storage Pty. Ltd., who forwarded an experimental shipment of fruit to China by such steamer. It was resolved that the association views with interest these experiments, and Mr. Tully was appointed to watch developments.

Overseas Shipments.—Secretary reported that in company with Messrs. Boardman and Foster he had visited the "Somerset" to meet Mr. Smith, one of the British scientists who is conducting experimental work on this steamer.

Fruit Pool.—Mr. Tully reported having attended a deputation to the Minister of Trade and Customs asking for increased payments for fruit sent to the pool. The Minister promised prompt payment of the £1 per ton retained by the pool. The Government was going into the matter of the increased price, but he did not hold out much hope .

Hail Insurance.—The replies from associations show that there is no general demand for this class of insurance. —Resolved that correspondence be read at convention.

Election of Executive.—On the motion of Mr. Tully, seconded by Mr. Lang, Messrs. James, Bailey, Tully and the secretary were appointed a sub-committee to draw up amended rule dealing with the election of Executive for submission to convention.

Australian Conference.—Mr. Lang submitted programme for the conference, May 7th to 12th, which was approved.

Annual Convention.—Programme and agenda discussed. Business commences at 10.30 a.m. on May 1st. A motor trip has been arranged to visit Frankston, Somerville, Tyabb, Hastings, Naval Base and Red Hill, etc. A comprehensive agenda paper has been prepared covering many items of interest to the fruitgrowing industry.

A full report will be published in our June edition.

Mr. S. Moodie, formerly of the *Argus* office, has been appointed secretary of the Victorian State Fruit Advisory Board.

FRUIT SHOWS.

Yarra Glen.

The 23rd annual show of the Yarra Glen Agricultural and Horticultural Society was held on March 21st. Mr. W. H. Everard, M.L.A., performed the official opening. Although this district is not a large fruitgrowing centre, the exhibits were highly creditable. The show, as a whole, was one of the best ever held by the society. Apple and Pear exhibits were very fine. Other fruit staged included Grapes, Passion Fruit, Almonds and Lemons. The champion prize was secured by Mr. W. Hubbard, who also secured 15 first prizes in other sections. Mr. J. Smedley was also a successful exhibitor in the various sections. Other prize winners included Messrs. G. Middleton, A. Jones, A. Cracknell, Mrs. A. H. Pearce, G. E. Briggs, J. W. Lawrey, and A. McCully.

* * *

Croydon.

The second annual combined horticultural show of the Croydon and Kilsyth districts was held on March 23rd and 24th. Notwithstanding the dry weather being experienced in the districts, the entries were much larger than last year, and the general staging and quality of the fruit was all that could be desired. The colour of the fruit was also favourably commented upon. The president of the society (Mr. H. L. Tompkins), Kilsyth, is to be congratulated on securing the Government Champion Certificate. A very close contest took place between this gentleman and Mr. H. R. Chandler. The following were also successful exhibitors in the fruit section:—Messrs. F. Topping, H. R. Busch, W. S. Gill, J. McGuire, J. Crossman, G. Hotchkins, A. C. Chandler, N. D. Hughes, J. E. Small, R. Francis, W. Hubbard, F. E. Hadfield, W. H. Turner, C. Fulford.

The show was officially opened by Mr. W. H. Everard, M.L.A.

* * *

Red Hill.

The second annual show of the Red Hill Agricultural and Horticultural Society, held on March 28th, attracted a large attendance. The show was officially opened by the Acting-Premier (Mr. McPherson), who referred to the amount of money the Government had spent on developmental work, also in the erection of cold stores. Replying to an interjection about the orchard tax, Mr. McPherson said if the growers really wanted an orchard tax he could see nothing against it.

The exhibits in all classes were of excellent quality. In the fruit section the champion prize for three cases of distinct varieties was secured by Mr. R. Holmes, with Mr. F. Cleine second. For the champion tray of dessert Apples the prize winners were Messrs. Holmes Bros., 1st; and A. Smith, 2nd. Other successful fruit exhibitors were Messrs. G. Clarke, G. Laurinsen, D. Barker, J. E. Holland, W. Ward, W. and C. Barker, J. Roberts, T. McIlroy.

DEHYDRATOR BURNT TO GROUND.

Severe loss was sustained by Messrs. Young Bros., of Ardmona, Vic., through their dehydrator being burned to the ground on March 23rd.

At the Red Hill (Vic.) Show—Standing (from left to right): Messrs. W. Calder (President), W. M. McPherson (Acting-Premier and Treasurer), W. Tyner, M.L.C., and members of Show Committee, judges, and official visitors. In front (seated): Messrs. W. H. Everard, M.L.A., J. E. Fenton, M.H.R., and Thompson (Show Committee). *R. E. Boardman photo.*

The fire broke out in the centre of the dehydrating chamber while Mr. E. L. Young and his men were packing some of the dried fruit at the other end of the building. Fanned by the suction of six fans, the flames developed with a roar, and within ten minutes had enveloped the whole of the interior of the building. Trying to save something, the men commenced to carry out. Efforts were made to save the fruit by removing boxes of dried fruits, but only 20 boxes were carried out. Within half an hour 100 men had arrived to help, but by this time the whole building, about 150 ft. x 80 ft., was gutted, and the flames reaching 50 to 60 feet high.

The dehydrator was of the "Williams'" type, and had been improved and remodelled by Messrs. Young Bros. (the

owners) last year. It had done most successful work this season ,especially with Apricots, Messrs. Young Bros. having dried 3,000 cases of Moorparks, and followed on with Peaches, Pears, and Prunes. The season was almost finished, the girls having been paid off two days previously, and the last of the Peaches were being finished.

As the temperature on the trays was only 155 deg. Fahr., it is surmised that one of the brick flues collapsed, allowing the flames to reach the drying chamber. Messrs. Young Bros. sustained a loss of several thousand pounds, as none of the dried fruit was insured, only the building and machinery being covered. The damage is estimated at £10,000.

Great sympathy is felt for Messrs. Young Bros.

FRUIT TREE CATALOGUE.

We have received from Mr. C. J. Goodman, Bairnsdale (Vic.), a copy of their 1923 fruit tree catalogue. An excellent publication attractively prepared, containing the very latest information as to all varieties of deciduous fruits in particular. It is pointed out by the management that every variety now listed in the Catalogue is a tested one, hundreds of varieties having been dropped on account of insufficient merit. It is only by this means that anything like standard commercial varieties can be obtained.

The Catalogue also contains up-to-date and valuable information for the planting, pruning and spraying of Fruit Trees. Then there are notes on Cross-fertilisation as well as the table showing number of Trees or Plants per acre.

A copy of this catalogue should be in the hands of every orchardist and intending planter.

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Thousands of people in Australia to-day have decided that Indigestion is not only unnatural but unnecessary. A poor digestion or weak stomach demands just the little assistance which a proper combination of herbal juices will supply. A.M.S. is a very well established remedy, which has aided many chronic dyspeptics to eat well, and have the eager appetite of a child. A little dose every day until the stomach is strong and healthy should be made part of the daily dietary. Take it regularly till you can do without it altogether. At all chemists 3/-, or by post 3/6 per bottle from T. A. Dickson, Chemist, Geelong, Vic.

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5/- per doz., etc.
Above Prices. free on rail.
FREDRICK T. LUSTY, Junr.
"Palmgrove Nursery,"
Arncliffe, N.S.W.
We can quote Plants and Seeds of all kinds. Prices Moderate.

Fruit Growers! Fruit Growers!
Business Announcement.

We have to advise clients that owing to the increase in our business, it has been found necessary to reorganise same with this object.

A new company, **THE UNITED GROWERS LTD.**, has been formed. The members are those hitherto associated in Griffiths and Co. Ltd., with the addition of Turner's & Growers Ltd., of Auckland, a firm largely known throughout the Dominion for their enterprise in the fruit industry. Mr. Harvey Turner, of Turner's & Growers Ltd., is chairman of directors of the new company, which will carry on their business in the Fruit Exchange Buildings, Blair and Allen Streets (the premises formerly occupied by their predecessors).

IMPORTANT.—We might point out that there will be no **alteration** in the firm's **stencil** hitherto used by growers for branding fruit consigned to Griffiths & Co. Ltd.

Shipments forwarded under the old mark will be duly received by the new firm in the ordinary way; advice notes, envelopes, etc., formerly in use by Griffiths & Co. Ltd., may be used until clients receive a fresh supply from the **UNITED GROWERS LTD.**, which will be supplied promptly to **anyone** on application, together with **stencil**, etc.

We look forward, on behalf of the new firm, to a continuance of your esteemed favours.

Yours faithfully,

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Poultry Notes.

(Conducted by Ian P. Hamilton.)

Prepare for the winter.

* * *

See that warm, protected pens are provided for your young laying pullets—and keep them scratching.

* * *

An occasional feed of short oats may be given with advantage.

* * *

The cheapest, and in most cases the best, system of housing is the intensive, or scratching-shed system.

* * *

The front of the shed should be about 8 ft. 6 in. high, sloping down to about 5 ft. at the back, and should be boarded up to 3 ft. from the floor in front.

* * *

Wire-netting used for the balance of the front should be of sufficiently small mesh to keep the sparrows out, otherwise you will soon find yourself feeding as many sparrows as fowls.

* * *

See that the birds get as much sunlight as possible during the winter.

* * *

Avoid draughty pens. The provision of plenty fresh air which is essential, does not mean draught.

* * *

About 8 square feet to a fowl is ample floor space to allow, but it is better to have too much than too little room, as overcrowding is dangerous in either winter or summer.

* * *

The Egg-Laying Competitions recently concluded have again demonstrated what can be done by scientific methods of breeding, careful selection, and properly-balanced feeding.

* * *

A flock worth while should average at least 230 eggs per bird per annum.

* * *

Where barley can be obtained at a reasonable price it may be fed occasionally with very good results.

* * *

Grain should be fed into a deep litter of straw during the winter months, so as to provide the fowls with plenty of necessary exercise.

Every poultry man should link up with the Egg Producers' Federation and help the men who are out to firmly establish the industry on a footing that assures the primary producer receiving a fair return for his labour.

* * *

How to Pick Your Best Layers at a Glance.

George Woodward, in his "Australasian Poultry Book," gives the following useful information on the subject:—

Head fine and narrow, eye bold and prominent, free from any wrinkles or coarseness. (The eye sunken or showing heavy eyebrows is a sure indication of a bad layer.)

Comb fine and smooth in texture, not heavy, coarse or rough.

Body should be handled for any undue fatness or internal complaint, such as dropping of the egg bag.

The best layer looks, as a rule, like a worker, and is one of the first off the roost in the mornings.

Long-legged birds are poor layers, and birds with long overhanging combs are too highly strung.

The bird with a long, narrow, snaky head and curled beak is also a poor layer.

* * *

Beekeeping Notes

Winter Feeding.

At the end of the honey season (says Mr. F. R. Beuhne, Victorian Government Apiculturist) every beekeeper should make a thorough examination of his stocks to ascertain whether each colony has a fertile queen, a sufficient force of worker bees, and enough honey to carry him through till September or October.

To get bees successfully through the winter months is a most difficult problem in North America and Northern Europe, especially where the rigour of the climate makes cellar-wintering almost a necessity.

In Australia we have no such difficulties, and in consequence bee-keepers pay too little attention to the subject of wintering, so far as the conditions of their colonies at the beginning of winter is concerned. Yet it is the condition of a colony, as to quantity and quality of stores, age and vigour of queen, and the number of worker bees at the end of one season, which largely determines the prosperity of, and the yield of honey from, that colony in the season following.

The first consideration is the amount of honey required by each colony for its winter use. This varies according to the strength in bees, the conditions of weather during winter, and the earlier or later presence in spring of nectar and pollen-producing flowers. On an average each colony should have from 25 to 30 lbs. of sealed honey to winter normally.

When, as sometimes happens, the brood combs contain considerably less than that quantity, it will have to be supplemented either by substituting combs of sealed honey for the outer empty combs of the brood chamber, or by feeding sufficient honey or sugar syrup to bring the total quantity up to requirements.

When, owing to the absence of a stock of sealed honey, or on account of a suspicion of disease, it becomes necessary to feed, sugar syrup is much to be preferred to honey.

Honey, although it is the natural food of bees, excites them much more than sugar syrup.

Feeding should always be done inside the hive in a properly constructed feeder. In the case of colonies which do not cover all the combs of the brood chamber, some of the outside combs may be removed before feeding is commenced, so that the whole of the syrup given will be stored in as few combs as possible, and where it will be covered by the cluster of bees, and thus prevented from souring.

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Sugar syrup is made of two parts (by weight) of 1A sugar and one part water, The water is brought to boiling point and the sugar added, keeping the vessel on the fire and stirring continuously till the liquid is perfectly clear. On no account should the syrup be left on the stove or fire without stirring, as it burns very easily, and in that state is injurious to bees.

To supply this syrup to the bees without waste and drowning it is necessary to have a simplicity feeder which may be purchased from a supply dealer for a few pence. It is simply a block of wood, grooved out so as to leave narrow divisions to prevent bees getting drowned, and is the most convenient feeder for box hives. The box is raised at one end, the feeder placed on the floor board, and the syrup poured in while still warm. The box is then lowered again. If a stock of bees is quite out of stores, at least 5 lbs. of syrup should be given and more later on, if required. It is better to give the syrup as fast as the bees will take it, than to continue feeding for days. The necessity for winter feeding generally occurs in Victoria only when hives have been robbed or extracted without regard to the winter requirements of the bees.

* * *

The greatest safeguard against robbing is the maintenance of strong colonies.

* * *

Soft candy for use in queen cages is made by adding best castor sugar to honey and kneeding the whole until it forms a stiff paste.

* * *

If the bees commence to build queen cells, it may be taken that they are undoubtedly queenless.

* * *

A method of inducing bees to remain where placed is to stuff the entrances tightly with grass, forcing the bees to bite their way out. If the work is well done this may take them two or three days, by which time they will, to a great extent have forgotten their old home.

* * *

In liquifying candied honey, it should be remembered that every particle must be dissolved, otherwise granulation will soon recommence, the remaining undissolved crystals, however small, acting as nuclei for fresh crystalisation.

* * *

Remember that bees have a keen sense of smell. They have been known to fly a mile or more over water to reach flowers on an opposite bank towards which they could be guided only by scent.

FRUIT WORLD ANNUAL.

The Fruit World Annual and Trade Record is now being prepared for publication.

To suit the wishes of the majority of subscribers and advertisers the "Annual" is compiled as from July, 1923, to June, 1924, instead of from January to December, as previously.

We were "snowed up" with appreciation of the 1922 annual. The issue now being prepared is better still. Many new features are introduced: the latest statistics will be published, in order to give readers an adequate grasp of the whole fruit industry in all its branches.

The spraying chart has been revised, and will be appreciated because of its authentic and tabulated information.

The feature for which particular appreciation was expressed is being repeated, viz., the bookkeeping system and income tax guides. This bookkeping system is extremely simple and can be readily followed by all; at the same time it is complete, and will save many headaches and difficult problems at Income Tax time.

A review of the fruit industry, dealing with every State and New Zealand, will be included. Thus readers can order copies to be sent to friends abroad. The postage interstate and to New Zealand will, on this occasion, be about 4d., instead of 1/2, as previously. The Annual, however, will be the same size, the reason for the reduction in postal charges being that with the 1923-4 Annual all the postal regulations will be observed, thus bringing the Annual under the newspaper postage rate.

The cost is 3/- post free. Readers are invited to make early application to the publishers—9 Queen St., Melbourne, Vic.

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SUBSCRIBERS' PAYMENTS RECEIVED.

The following are the subscriptions received from March 20th to April 20th, 1923. The month quoted in parenthesis indicates to what date the subscription is paid. These are exclusive of the subscribers who have paid to local agents or to our offices in the various States:—

H. Alston (Aug., '24), G. H. Arnot (Dec., '23), F. Artlett (Dec., '23), J. P. Bainbridge (Dec., '23), J. J. Bagnall (Sept., '23), C. C. Barberie (Dec., '23), B. Barnes (Apl., '23), F. A. Bloom (Feb., '24), F. C. Bradley & Son (Oct., '23), W. Bray (Dec., '23), A. B. Briggs (Apl., '24), Alex. Brown (Feb., '24), H. A. Burbury (Feb., '24), T. N. Cuttle (Mar., '24), Darter Bros. & Co. (Dec., '23), G. N. Dame (Apl., '24), Duncan & Simpson (Oct., '23), J. S. Eales (Mar., '24), J. Fleming (Jly., '23), H. L. Goulter (Feb., '24), M. W. Gregory (Apl., '23), J. Hargreaves (Apl., '24), A. S. Henderson (Dec., '22), B. Henderson (Mar., '24), E. M. Herring (Oct., '23), Geo. Holder (Apl., '24), J. W. Howie (Oct., '23), E. H. Ilett (Mar., '24), Kynock Limited (Jan., '24), John Lang (Dec., '23), C. Martin (Mar., '24), Major E. Mayfield (Nov., '23), C. P. Meyers (Dec., '23), F. Morrison (Jly., '23), W. McIver (Jan., '24), W. McMinn (Jly., '23), H. Oates (Feb., '24), A. J. Pearson (Feb., '24), W. G. Petty (Jly., '23), V. A. Pool (Dec., '23), Pryde Bros. (Dec., '23), W. Read (Dec., '23), T. W. Robson (Feb., '24), T. C. Robinson (Apl., '24), C. R. Roper (Mar., '24), E. J. Rule (Mar., '24), A. Schulze (Oct., '23), K. Scott (Apl., '23), W. T. Sebire (Feb., '23), G. Sell (Jly., '23), B. & J. Shaw (Dec., '23), J. M. Sinclair & Sons (Feb., '24), H. V. Smith (Oct., '23), Geo. Smith (Oct., '23), G. H. Sprague (Feb., '24), C. Trevatt (Nov., '23), O. A. Tucker (Jan., '24), Prof. W. P. Tufts (Nov., '23), A. J. Turner (Nov., '23), E. E. Wagstaff (Mar., '24), E. S. Wilkinson (Mar., '23), Col. G. F. Wilkinson (Dec., '23), T. G. Williams (Sept., '23), L. Winser (Feb., '24), E. V. Yeomans (Mar., '24), A. Zerbe (Jly., '23).

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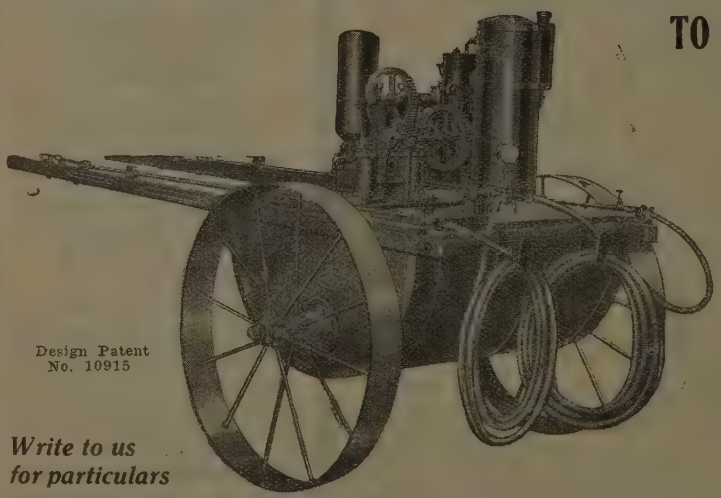

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Hopkins & Lipscombe, Fruit Exchange.
Rogers, F. H. G., Fruit Exchange.
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Wade, Capt. W. J., M.B.E., 8 Bridge St. (representing Port of Manchester).

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Peacock & Co., W. D., Fruit Exporters, and at London.

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Central Produce Mart, Moray Place.

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Da Costa, Gerald, Covent Garden.
Fruit & Produce Exchange of Great Britain.
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Landauer & Co., 39 Eastcheap.
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Humber Fruit Brokers Ltd.
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White & Son Ltd.

Liverpool.
J. Adam, Son & Co.
Roger White & Co., 37 Victoria Street.

Manchester.
North of England Fruit Brokers Ltd., Port of Manchester (representative Capt. W. J. Wade, M.B.E., 8 Bridge St., Sydney, N.S.W.

British and Australasian Market Reports

AUSTRALIAN APPLES AND PEARS IN GREAT BRITAIN.

Cabled reports of sales of Australian fruit shipments received during the month of April are as follows:—

London (4/4/23)—

Tasmanian Apples ex the s.s. *"Orsova"* turned out dissappointingly, the fruit being unattractive in appearance and immature. *Obviously it has been shipped too early*, for it has been well carried, but there is much evidence of bitter pit. Cox's Orange Pippins realised 8/- to 17/6 a case; Alexandras, 6/9 to 12/6; Alfristons, 8/6 to 13/-; Duke of Clarence, 9/3 to 12/6; Cleopatras, 8/3 to 15/6; and Ribstons, 6/9 to 15/-.

London (11/4/23)—

Apples shipped by the s.s. *"Boorara"* are discharging apparently in good condition, but Cox's Pippins are pitted. Some sales have been made at Covent Garden at 10/6 to 13/- a case.

Liverpool (11/4/23)—

Tasmanian Apples shipped by the s.s. *"Persic"* to Liverpool realised as follow:—Ribstones, 10/6 to 13/3 a case; Alexandras, 8/9 to 11/3; Alfristons, 10/3 to 14/-; Cleopatras, 12/6 to 16/9; New York's, 11/6 to 16/3; Cox's 11/- to 15/-; and others, 8/6 to 13/-.

Liverpool (14/4/23)—

The market for Apples is easier. Following are the prices realised for the balance of the shipment by the *"Persic"* at Liverpool:—Ribstons, 7/6 to 9/3; Alexandras, 8/- to 10/-; Alfristons, 8/6 to 11/6; Worcesters, 11/- to 13/-. The following sales were made in New Zealand Apples by the "Remuera":—Dunn's 10/- to 12/-; Jonathans, 4/- to 10/-; Cox's, 4/- to 20/- (average about 10/-); Worcesters, 4/- to 6/-; Ribstons, 5/- to 10/-.

A considerable quantity of the Pears by the "Persic" at Liverpool were worthless, and were mostly unripe. Sales were as follows:—Trays of Clairgeaus, 5/3 to 6/6; Boscs, 6/6; cases of Napoleons, 14/-; Comice, 19/3.

London (23/4/23)—

The market for Apples is slow. Best sorts are selling fairly well, but inferior lots are saleable only at unremunerative prices, especially Tasmanian, many of which are of poor quality and pitted. Best Cleopatras and Cox's from all States, ex the s.s. *"Port Albany," s.s. "Surrey," and the s.s. "Moreton Bay,"* are fetching 10/- to 12/- a case; Jonathans, 9/- to 10/-; others, 7/6 to 9/-; and wasty lots, 5/- to 6/- a case. Western Australian Pears, ex the s.s. *"Ballarat,"* realised exceptional prices. Some trays of Comice brought 18/- to 21/-; Beurre de Capiaumont, 5/- to 6/-; and Josephine, 6/- to 7/- half cases; Beurre Bosc, 14/- a case; others, 6/- to 13/- a case; Beurre Clairgeau, 20/-; and Anjous, 16/6 a case.

The *experimental shipment* of Victorian Plums by the s.s. "Moreton Bay" arrived in excellent condition, and realised 10/- a tray.

Messrs. S. J. Perry & Co., Melbourne, have received a report, under date 20/4/23, of the sales of Pears and Apples ex s.s. "Surrey," from their London principals as follows:—

Pears.—Beurre Bosc (per case), 20/- to 30/-; B. Hardy, 20/- to 25/-; B. Clairgeau, 15/- to 18/-; B. Capiaumont, 12/- to 17/-; Clairgeaus in ½ cases, 7/6.

Apples.—Cleos., 11/- to 15/-; C.O.P., 14/- to 15/-; Jon., 10/- to 14/-; Dunn's, 10/- to 11/-; Reinnettes, 9/- to 11/-.

AUSTRALIAN FRUIT IN HULL.

Messrs. Parnham Pty. Ltd., Melbourne, advise (13/4/23) having received a cable from Messrs. White & Son Ltd., of Hull, advising the prices realised for Apples shipped in the steamer "Port Albany." They are as follow:—

Cleopatras, 12/- to 15/6 (majority, 13/9 to 15/-) per case; Jonathans, 10/6 to 13/- (majority, 11/- to 12/-) per case; Dunn's, 13/3 to 14/3 (majority, 13/6) per case.

This portion of the cable evidently refers to Tasmanian Apples, as the prices for Victorians are mentioned as under:—

London Pippins, 10/3 to 11/6 per case; Cleopatras, 14/3 to 15/- per case; Jonathans, 10/- to 11/9 per case.

The "Port Albany" sailed from Melbourne on 23rd February, carrying 1,645 cases Victorian Apples for London, and 6,535 cases for Hull.

Victoria.

Melbourne (24/4/23).

Apples, Jonathan, 4/- to 7/6 per bushel case; cooking, 3/- to 6/-; Pineapples, 14/- to 18/-; Bananas, 20/- to 28/-; Tomatoes, 10/- to 12/-; Grapes, 8/- to 14/-; Lemons, 12/- to 14/-; Oranges, 16/- to 20/-; Peaches, 4/- to 7/-; Pears, 2/- to 6/-; Passion Fruit, 10/- to 13/-.

New South Wales

Sydney (25/4/23).

Apples, Local: Dessert, choice 6/- to 7/-, others 3/- to 7/-; Victorian: Dessert, 5/- to 7/-, cooking 3/6 to 6/-; Tasmanian: 3/6 to 7/- bushel-case. Bananas, Tweed River: Extra choice 33/-, choice 26/- to 29/-, medium 19/- to 23/-, double-case; Grapes, White Muscatels, 5/- to 8/- per ½ bushel case; black Muscatels, 4/- to 12/-; Cornechons, 6/- to 7/-; white sherry, 3/- to 6/-; Custard Apples, 6/- to 8/-; Pineapples, Smooth-leaf, sound, 10/- to 18/- double. Lemons, Choice 15/- per bushel case; good 8/- to 10/-, others 5/-; Oranges, Main crop, 5/- to 8/-; second crop, 11/- to 12/-; Queensland, 14/- to 15/-; Mandarins, Queensand, 18/- to 20/-; Passion Fruit, Extra choice 10/- to 12/-, medium 5/- to 8/- half-bushel case; Peaches, Local: 2/- to 5/-: small 1/6 to 2/6; Victorian: Choice, 8/- to 13/- bushel; Pears, Local, 5/- to 8/- ; Tasmanian, 8/- to 10/-; Persimmons, 3/- to 5/- half-bushel.

Current quotations (exclusive of charges for cases for local fruits)

Queensland.

Brisbane (18/4/23).

Apples, Jon., 9/- to 11/6 per bushel case; Five Crowns, 7/- to 8/6; D.C. and T.P., 9/- to 10/-; Scarlets, 9/- to 10/6; F.C., 7/- to 9/-; R.P., 8/- to 9/-; N.Y.P., 10/- to 10/6; Alex., 8/- to 9/-; Spitz., H.B. and F.B., 10/-; Pears, Keiffers, 10/- to 12/-; Oranges, local common, 8/- to 9/-; others 6/- to 7/-; Mandarins, local, 12/6 to 14/-; Lemons, S.A., 16/- to 17/-; local, 2/- to 4/6 per ½ bushel case. Custard Apples to 6/-; Passion Fruit, 8/- to 11/-; Pines, rough green, 8/6 to 9/-, hard to sell; smooth, 3/- to 5/6; Bananas, Cavendish green, 7/6 to 13/6 per case, medium 4d. to 5½ per doz., choice, 6d. to 8d., sugars, 3d. to 8½d.

Western Australia.

Perth (16/4/23).

Apples, Jon., 6/- to 8-3 others to 4/6; Cleos., best to 6/9, others to 3/6; Dunn's best to 5/9, others to 3/6; King David to 8/-; Granny Smith to 6/3, others to 4/6; Pears, Barlett's dumps to 9/-, flats 5/- to 7/6; W. Nelis best to 5/6, others to 3/-; Beurre, dumps 2/6 to 4/-; Keiffers to 5/6, others to 3/6 ; Oranges, best to 14/6, others to 7/-; Navels to 8/6; Lemons, 8/- to 10/-, others down to 2/-; Peaches, best to 13/9, others to 6/-; Persimmons, best to 10/9, others to 4/-; Passion Fruit to 9/3; Grapes, best open to 7/6, others to 4/- closed best to 5/-, others to 3/-.

South Australia.

Adelaide (20/4/23).

Apples, eating 8/- to 9/- per ,case cooking, 6/- to 7/-; Figs, 10/-; Grapes, dark, 6/- to 8/-, white, 6/- to 8/-; Muscatels, 7/- to 8/-; Lemons, 7/- to 9/-; Oranges, 8/- to 12/-; Peaches, 7/- to 9/-; special 10/-; Pears, eating 8/- to 10/-; Plums, dark 6/- to 8/-. Prices for cases are excepted.

New Zealand

Wellington (19/4/23).

United Growers Ltd., formerly Griffiths & Co., advise as follows:—

Grapes are selling exceedingly well, being worth from 18/- to 20/- at to-days sales

We have had numerous inquiries for this fruit, our last sales being 26/-. We think that if we had supplies to offer buyers to-day, prices would have surpassed this figure.

Growers should remember, however, that it is most essential to ship fruit of the right kind to suit our market, viz. 15 count upwards and the pines should be well colored. Quite a lot of our growers convey the impression that they have the idea, if new season fruit is packed very green it will land here well colored, but as only several days elapse after they leave your side until it is marketed, the space of time is too short to allow the ripening process to take place. We have held fruit for over a month for some of our Queensland clients, even then there has been no sign of it turning color.

Dunedin (19/4/23).

The Central Produce Mart Ltd., report under date 19/4/23 as follows:—

Choice Queensland Bananas on this market would to-day realise 27/- to 30/- per case for really choice fruit. First-grade Mandarins, packed in full gin cases, probably 30/-. For really first-class quality Pines we would expect to secure from 27/6 to 30/- per case. First quality Passion Fruit, half gins, we would expect 15/- to 20/-, and possibly later on much better values. Adelaide Lemons would realise to-day 20/- for first quality.

We can recommend consignments of Bananas if in close cases so that there is no danger of frost, only prime quality fruit, no black in heart; first class Mandarins; a good consignment of Lemons; Some nice Queensland Pines and Passions; and particularly choice Australian Grapes.

We expect to land to-day 5,000 boxes of these Grapes from Adelaide; we are having an advertising campaign and we hope to be able to place the whole of the consignments on this market at about 8d. to 9d. per lb.

Dunedin, (16/4/23).

Messrs. Thos. Paterson & Co., report under date 16/4/23.

Pineapples are still in short supply, and first class Pines would realise from 17/6 to 20/- per case. **Loquats, Passion Fruit** and **Mandarins** are short and early consignments would be welcomed, and if shipped in moderate quantities, in say 30 to 36 lb. boxes, they would probably realise from 23/- to 28/- per box. **Bananas** are still coming forward from Raratonga and Suva, and we do not advise consignments of Queensland Bananas at the present time. **Lemons.**—Our market is still well supplied with Italian and American Lemons, and we cannot recommend consignments from Australia until the middle of next month.

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MANDARINS, POORMAN ORANGES, SEVILLES,
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Representing the deciduous, citrus and dried fruits industry of Australasia.

Published the First of each Month.

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Tasmanian Director: HON. L. M. SHOOBRIDGE, M.L.C.

EDITORIAL.

Fruitgrowers Conferences

THIS issue of the "Fruit World," contains reports of the fruit conventions held at Melbourne. Many interesting matters were brought to light at these conferences, whilst the educational and social features were enjoyed.

One outstanding weakness is that after passing resolutions, the opportunity is largely lacking for the executive means of carrying the resolutions into effect.

The tendency is altogether too great to refer things to the Government,—for a perusal of the resolutions will show that the Government is either being asked to do this or requested not to do that.

Experience in other parts of the world, as well as in Australia, goes to prove that industries and associations develop through their own initiative and enterprise rather than by hanging on to the skirts of the Government.

Fruit Pools will again be sought by the growers, and all the political power they possess will be concentrated to achieve this end, but in extenuation of this, it must be pointed out that it is largely Government action which has brought about the present unsatisfactory position in the soft fruits industry.

A few years ago, the fruitgrowers had a sturdy boast that they, of all industries, sought the least from the Government.

But times have changed since then.

There is one sphere of activity open to growers' organizations which should certainly be explored—that is in advertising fruit, for if the consumption of fruit in Australia could be doubled (and this is easily within the realm of possibility) the vast majority of orchardists' problems would vanish like smoke.

It is recognised that Mr. Harold Clapp, Chairman of the Victorian Railways, has performed noted service by the advertising campaign, which he instituted in the railway department. Appreciation of this fact was expressed at the official opening of the Australian Conference of Fruitgrowers, but the fact remains, as Mr. Clapp pointed out, that this but touches the fringe of the enterprise, and only points the way to what was possible in the way of utilizing the vast latent forces in advertising to increase fruit consumption.

The old excuse is frequently made that there is no practicable scheme at present by which growers can equitably contribute towards the expenses, yet the fact remains that the growers' associations support only part-time Secretaries, whereas if a capable full-time man were employed, very much could be done to advertise fruit by conducting fruit and health campaigns in the cities (in which support would be received from municipal councils, welfare societies, dental and medical professions, etc.), and such an officer could also utilise the repeated offers of the public press of free space for constructive articles re the medicinal and dietetic value of fruits.

If it is found difficult to collect necessary finances from individual growers, surely under wise leadership growers could be induced to each contribute half-a-dozen cases of fruit annually, which would be ample to finance a progressive forward movement.

PRUNING TIME, AND SOME QUIET THOUGHTS.

The chief operation for the month of June on the orchards where deciduous fruits are grown is pruning, and this work requires the constant attention of orchardists until completion.

Stone fruits have been ready for the secateurs for some time, and doubtless where large areas are grown, this work is already well in hand.

Apples and *Pears* should also be about ready for pruning, and no time should be lost in getting on with this work.

Pruning in the orchard requires much careful thought, and orchardists would be well advised to take a personal and active part in this operation, the bulk of which is too often left to more or less inexperienced help.

Good fruiting wood, which has taken years to build up, can be ruthlessly destroyed in a few seconds, and the opinion is now rapidly gaining ground that thinning of fruit after it has set is wiser than drastic thinning of fruit spurs before blooming.

This does not mean that thinning of the bloom is entirely unnecessary, but rather that moderation is essential.

Providing the trees have been well spaced and properly shaped, fairly straight ahead work is all that is required, such as taking out surplus lateral wood and controlling top growth.

In districts that have suffered through the droughty season, heavier cutting may be necessary, but whatever pruning the condition of the trees may require, bear well in mind that the operation will have a permanent effect on the tree, and endeavour to visualise what that effect is going to be.

It is at pruning time that the careful and observant orchardist makes notes of the requirements of his trees; where lack—of growth is shown, stable manure can be used with good effect; those parts of the orchard that require drainage can be noted and the trees that are affected with scale, red spider, etc., can be set down for the necessary spraying and the spring programme can be most effectively mapped out.

A few years ago pruning demonstrations were held at this period of the year in many fruitgrowing districts, but these have to a large extent been discontinued.

It would be a good idea for fruitgrowers' associations to again enter enthusiastically into the work of organizing field days and pruning and spraying competitions and demonstrations.